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Clinical Lecture.

ON CERTAIN SEXUAL NEUROSES.

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ANATOMY AND PHYSIOLOGY.

The instinct of self-protection, the instinct of hunger, the instinct of re-production, these are the primary and compelling forces of animal life. Of these, the instinct of reproduction, as shown in the sexual function, is the most intermittent and shortest in duration, yet most intense in its activity, while it lasts.

The sexual function develops at the age of from 9 to 15 years, according to race or climate. In man it continues almost throughout life-time, sometimes even receiving a new impulse in old age.

The anatomical basis of the sexual function consists of a brain-centre, a spinal-centre, peripheral nerves and the sexual organs.

The *brain-centre* has not been exactly localized. Erection can be produced in dogs by irritating the cortex. Sexual feeling in many lower animals is closely associated with the sense of smell, and it is possible that the centre of sexual sensations in some domestic animals is in or near the limbic lobe, a lobe which lies on the median surface of the cerebral hemispheres, and identical in part with the gyrus fornicatus.

In savage and semi-civilized man sexual feelings were much more closely associated with olefaction than is the case in modern civilized society. In persons with degenerate brains or depraved instincts, gross illustrations of the relation of odor and sexual feeling are still seen. Krafft-Ebing cites the case of a man in whom erections were caused by the odor of flowers. Cardinal Richelieu is said to have been in the habit of stimulating voluptuous feelings by sitting in a richly perfumed room. Ordinarily, however, perfumes have but a remote sexual suggestion. This feeling is much more closely associated with visual images; more rarely by music, certain kinds of which produce voluptuous sensations. I have heard a patient confess that going to a certain Wagnerian opera caused feelings almost amounting to an orgasm. There is no definite cerebral "centre" for sexual feelings, however. They are most likely associated chiefly with the activity of the occipital and limbic lobes.

The cerebral centres are those in which arise voluptuous feelings and sexual desires. They also act upon the lower centres stimulating or inhibiting their activity. They have, therefore, a psychical and a mechanical side.

The *spinal centre* is situated in the lower part of the spinal cord and has the purely mechanical function that of controlling erection and ejaculation.

The *peripheral nerves* are the efferent or nervi-erigentes which are vaso-motor and motor, and the afferent which are partly nerves of cutaneous sensation and partly excito-reflex.

Erection—This is done by the afferent nerves to the blood vessels, which arise from the 1st to 3d sacral roots. Also by motor nerves to ischio-cavernous, bulbo-cavernous and part of transversus perinei muscles, arising from 3d to 4th sacral roots.

Ejaculation—This is done by efferent nerves to bulbo-cavernous muscles, arising from the 3d and 4th sacral roots.

The afferent sensory and excito-reflex nerves are the cutaneous nerves of the penis, running in the pudic nerve and arising from the 3d, 4th and 5th sacral roots.

The *genital centre* in the spinal cord extends from the 1st to the 4th sacral nerves, the erection centre being higher than the ejaculation centre.

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The bladder and rectal centres overlap the genital, but are slightly lower than it, the bladder centre being the lowest.

The function of the peripheral organ in the male is to accomplish erection and ejaculation. The first is done partly by a relaxation of the muscular fibres of the corpora cavernosa and arterioles allowing the blood to flow in, and partly by the contraction of the bulbo-cavernous and ischio-cavernous, and deep part of transverse perineal muscles which constrict the root of the penis. The ejaculation of semen is the result of spasmodic contraction of the bulbo-cavernous muscle.

The sexual mechanism is closely connected with the vaso-motor nerves, so that the vaso-motor centre in the medulla may be looked upon as part of it. By irritating this as with asphyxiated blood or muscarin, erections may be caused.

The spinal centre is dominated by that in the brain. By an effort of the will voluptuous thoughts are inhibited or encouraged and the spinal centre correspondingly affected. Man alone possesses this inhibitory power and is distinguished from the brutes thereby. The spinal centre may be active when cut off entirely from the brain. Thus, in a case of total transverse destruction of the cord at the 12th dorsal vertebra operated upon here by Prof. Abbe, the patient had full erections and emissions, though entirely unconscious of them. The spinal centre developes earliest and erections may occur at the age of three or four years, while the cerebral centre and sexual feelings do not normally develop till the time of puberty. The cerebral centre, though developed late, often outlasts the spinal; and we see senile voluptuaries, spinally impotent yet indulging in all kinds of erotic excitements. These old men experience a sexual excitement which is purely cerebral.

We will turn now to the study of some of the disorders of the sexual functions. I wish first to show you on this chart the classification which is to guide us in our study.

You will understand that all those disorders which relate to cerebral centre so far as it is concerned with the sexual feelings and desires are called *psychoses*. Those disorders which are concerned with the lower centres and peripheral nerves, as well as with the more mechanical side of the cerebral centre are called *neuroses*. The distinction can not always be sharply drawn, but it is a convenient one.

CLASSIFICATION OF FUNCTIONAL SEXUAL DISORDERS.

The Sexual Psychoses are Divided into,

A—The Vicious Habits, such as masturbation, &c.

B—The Sexual Perversions, these are classed as

1. Masturbation, sexual murder and anthropophagy.
2. Flaggellation.
3. Exhibitionists.
4. Stercophily.
5. Contrary Sexual Instincts of which Pæderasty and Bestiality are examples.

C—Excessive Sexuality:—

1. Sexual precocity.
2. Senile sexuality.
3. Satyriasis.
4. Nymphomania.

Of the *sexual perversions* I shall say nothing except that they are happily as rare as they are disgusting, and are usually an evidence of mental deterioration. They are sometimes, however, acquired vices being the result of a continual search for new sexual stimuli on the part of voluptuaries.

Historians have asserted that several of the Cæsars were members of this latter class, so also was Louis XI and probably a good many other representatives of royalty in earlier days.

The Sexual Neuroses Are:

A—The Sensory Neuroses:
- Neuralgias.
- Parasthesias.
- Anæsthesias.
- Psychical Anæsthesia, (Loss of sexual desire).

B—The Motor Neuroses:
- Spasmodic—Nocturnal Pollutions.
- Paralytic—Spermatorrhœa.

C—The Secretory Neuroses:
- Polyspermia.
- Aspermia or Azoospermia, (Sterility).
- Prostatorrhœa.

D—Mixed Neuroses:

1. Impotence—viz:
   - *a.* From organic defects and diseases.
   - *b.* Psychical form.
   - *c.* Neurasthenic form.
   - *d.* Congenital defects.

Of the numerous and distressing array of maladies in the list here shown, the neurologist deals with but few, and these are:

Neuralgias.

Pollutions and Spermatorrhœa.

Impotence.

Masturbation and its various psychical results.

I propose to speak to you to-day only of the sexual psychosis, or vicious habit of masturbation and its most frequent consequence, seminal pollutions.

MASTURBATION AND POLLUTIONS.

Masturbation is the name given to the vicious habit of artificially exciting the sexual orgasm.

It is a very common vice in boys and less common but present in girls, and in adult men and women.

It is usually only a vice due originally to low associations and teachings among children. In some cases it is a disease or rather the symptom of a neurotic or insane constitution.

Ætiology—It is most common between the ages of 14 and 18, but may begin earlier. Even infants and very young children sometimes masturbate usually as the result of some local irritation which leads them to rub the genitals. Thus for example a tight prepuce, eczema or worms may lead to the practice; but it is usually taught by a companion. The practice sometimes attacks schools almost like an epidemic, for in every institution a certain per cent. of the boys are sexually precocious or vicious while the others are ignorant and innocent of the evils of the practice. Masturbation is relatively rare after twenty but is practiced throughout life even unto old age by some.

Results: Masturbation as ordinarily practiced leads after a time to a feeling of malaise, mental depression, disinclination to work, or study or enjoy one's self as before. The appetite is a little impaired, the extremities easily get cold, and perspire readily. Peculiar numb feelings are felt in the hands and feet. There is an unnatural nervousness and irritability, and the power of concentrating the mind is a little weakened. The patients often have dilated pupils and hyperæsthetic skin. After a time nocturnal emissions occur. The organs become irritable and slight excitement causes erections. These symptoms may be slightly marked and pass away in a day or two, or until another indulgence occurs.

Masturbation is sometimes done to an extraordinary extent, even daily or twice daily for a considerable time.

After a while the young man begins to find that he is not well, and realizes that this habit is hurting him. Then if he be sensible and of healthy constitution he stops. Others are frightened out of it by friends or by reading the terrorizing stories printed in quack advertisements and circulars. Sometimes the fright thus caused leads the unhappy youth into a condition of hypochondriasis, which is helped on by the occurrence of nocturnal pollutions and the nervous debility resulting from his past indiscretions. In other cases in which there is a decided neurotic history, a genuine neurosis which is called sexual neurasthenia develops and annoys the patient for years.

Masturbation rarely leads to insanity and is oftener a symptom than a cause of such disorder.

It is occasionally the cause of epilepsy. When this is the case the convulsive attacks are likely to put on a peculiar hysteroid phase, they are accompanied with peculiar co-ordinated convulsions and emotional disturbance.

Case I. The patient whom I have just shown you illustrates a very common phase of the trouble. He is a boy of sixteen, who belongs to a somewhat neurotic family. He has been carefully brought up, and has had no nervous disorders. Two years ago he learned the habit of self-abuse, and has since practiced it weekly and sometimes daily. A few months ago his parents noticed that he was more irritable, lost interest in his studies, looked pale, slept badly, and became somewhat thinner. Inquiry revealed the source of the trouble, and also that he was having one or two nocturnal emissions weekly. The boy was badly frightened about himself. He was placed on bromides, taken from school, and kept at work out doors. But his emissions continued. I saw him a month ago, and prescribed atropia and bromides, twice a day, noon and night, with a drachm of fluid extract of salix nigra at night. Besides this, cold steel sounds were introduced into the urethra for ten minutes, three times weekly. He was made to take cold sponge baths daily, and was given an impressive lecture on the necessity of stopping his bad habits. He is very much better now, and on the high road to recovery.

AUTOMATIC MASTURBATION.

In some cases masturbation is done automatically in the sleep, and then very stringent measures are needed to overcome the practice.

Case II. A boy aged fourteen, of a very neurotic family, had suffered for over two years from chronic chorea and incontinence

of urine. The bladder would empty itself in the day time as well as at night, so that he had to wear napkins constantly. I suspected masturbation, and it was confessed to me. The practice was stopped. The enuresis during the daytime then ceased also, but it continued at night, and was not in the least controlled by belladonna, ergot, bromides, rhus or other remedies. A brother who slept with him told me that the boy made peculiar convulsive movements of the legs during sleep, and I suspected involuntary masturbation. I contrived a splint by which his legs were kept apart and immovable. He wore it and his enuresis ceased. His chorea also gradually disappeared.

Case III. A still more obstinate case was that of a single man, aged 28, who suffered from the neurasthenia of adolescence, and who had nocturnal pollutions. He would awake and find himself in the act of masturbating, and there was no doubt that the pollutions were the result of this involuntary process. He made a number of ingenious attempts to stop it. He tied his hands behind him; but worked himself loose in his sleep. He then tied his hands to the bed posts above his head. This answered for a time, but again he succeeded in untying the knots and getting free.

Finally I put him in the masturbation drawers, devised by my colleague, Prof. Graeme M. Hammond. These consist of strong canvas drawers, fastened about the waist with steel bands, the side of which are padlocked. The patient locked himself in the drawers every night, hid the key, and his pollutions ceased.

Prognosis. The habit never causes serious disease in persons of originally healthy nervous stock. In neurotic persons it leads in some cases to sexual hypochondriasis and neurasthenia with nocturnal pollutions, and this is its commonest evil result.

Much more rarely it excites epilepsy and insanity. The old views that masturbation is a frequent cause of insanity are not now entertained.

The extraordinary impunity with which some persons masturbate, is illustrated by the patient whom I have shown the class recently as a case of sexual neurasthenia.

Case IV. The man is a peddler, married, and forty years old. He began masturbating at the age of sixteen, and has continued almost daily ever since, *i. e.* for twenty-five years. Even marriage did not cause him to desist, for he experiences greater pleasure in self-abuse than in natural indulgences. The result is less than might be expected for he is alive and sane, which is indeed surprising. But he suffers now from, sexual weakness, neurasthenia, dyspepsia, and a long train of subjective symptoms. The fact that he has masturbated so much and preferred it to sexual indulgence, is evidence of a congenital perversion of the sexual function. For though we can not explain the reason, it is certain that in normal individuals, masturbation is a depressing, and more or less injurious act, while the normal sexual act is not.

Diagnosis. Many victims of the masturbation habit, who have come to recognize its evils and tried to stop it, develop as I have said a hypochondriacal condition, and feel sure that there is something in their faces, which reveals to the world their trouble. This is not the case. But there is a certain physiognomy, which in a measure, characterizes the masturbator to such an extent that an experienced observer can detect it. The pale, pasty complexion, moist furtive eye, dilated pupil, listless, restless, and depressed manner, the wet flabby palms, hyperæsthetic skin, all help to tell the story. Locally the penis is often reddened and more or less turgid, the scrotum relaxed, and a variocele may be present.

Examination of the urine may reveal spermatozoa. The urine also is almost always of rather low specific gravity, and contains a great excess of phosphates, both earthy and alkaline.

The Treatment: Moral, Hygienic, Local and Medicinal.

The patient must be told plainly the necessity of stopping the practice. He must be impressed, but not terrorized. He should be kept out of doors at vigorous physical exercise; for sedentary and solitary work is always bad for such cases. He should be made to take cold water baths. He should sleep on a hard bed with light covering, and he had better sleep with some one whose presence may exercise a controlling influence. He should not eat heartily at night, never just before going to bed and what is still more important he should not drink before going to bed. Sometimes it is well to have him wakened at an early hour in the morning, when he should empty his bladder. For emissions occur often early in the morning and are promoted by the irritation of a full bladder.

Locally cold steel sounds may be introduced, and allowed to remain for ten minutes, three or more times a week. Or

the psychophor or Ultzman's short catheter may be used. In bad cases with a great deal of prostatic irritation, local applications of nitrate of silver are needed. Internally, a mixture of Tinct. opii Mv, Tr. camph. Mx, and Tinct. lupulin. Mxxx, may be given at night, the ingredients being somewhat varied in amount to suit the case. I once gave this mixture to a sailor, who like most sailors masturbated and suffered from pollutions. It cured him, and he gave some to the captain who prescribed it to the mates, and before the voyage was over, the whole crew were rejoicing in the efficacy of the combination.

Bromides, chloral, atropia, and salix nigra are also drugs which are often useful.

The mechanical measures which have been devised for preventing erections, such as rings with sharp teeth, are rarely needed and rarely useful. They may even do harm by directing the mind to the affected function.

I do not believe it right for the physician to prescribe fornication. It is not safe nor curative, apart from the moral aspect of the matter.

It has always struck me also as pretty small business for a man to purposely select a wife to relieve him of the results of a weak will and vicious sensual indulgence. If marriage comes in the natural course of events as it often does, so much the better. But to select a wife as a remedial agent for masturbation is unjust to the woman and a confession of moral and mental feebleness.

Man is distinguished from the brute by his self-control. Let him bear this fact in mind and raise himself above the animals by a determined effort of the will. Pure thoughts, and chaste associations, vigorous physical exercise and a resolute effort to act a manly part will always be successful.

COMMUNICATIONS.

A FEW NOTES, DIDACTIC AND CLINICAL ON OSTEO-GENESIS AND OSTEO-PLASTY. *

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Modern research and experimentation with the application of facilities which recent discoveries have placed in our hands, have given an immense impetus to the study and utilization of surgical osteogenesis.

This term, in this instance, is restricted to that process, inherent, in healthy bone and its investments, which is called into action, in that class of cases, in which, through surgical intervention the osseous structures are directly dealt with.

Anæsthetics have made it possible to now successfully encompass manipulation of bone substance, which always entails considerable consumption of time. Hæmorrhage may be easily controlled and the operating field efficiently cleared of accumulations of blood and coagula, which obscure the normal arrangements of the parts. Intelligent antiseptic methods eliminate the danger of infection.

Surgeons, pathologists and physiologists, have, for ages, been occupied in the study of regenerative osteogenesis and even until our own day, there is no unanimity of opinion among our ablest authors, on the question of the share which the periosteal envelope, the medulla or adjacent parts, contribute towards the protection of callus and solidification of bone. That there should be so wide a divergence of opinion among those accustomed to precise and exact scientific observation, is difficult to explain.

It is generally conceded that under ordinary circumstances the periosteum plays an important part, but that it is the sole agent, in bone reproduction has been denied.

It is important, however, before anything definitely can be undertaken, that some middle ground be reached and so have positive evidence of the divers functions of the fibrous membrane, that we may be acquainted with the various lesions in which it seems to be the sole regenerator and those in which it serves but a subsidiary part.

The periosteum is a thin, fibrous membrane which envelops and nourishes the bones. Histologically identical in composition and arrangement with ordinary thin, fibrous aponeuotic plates of tissue, its minute elements have no characteristic relations to each other, and the precise manner, in which its osteoplastic layer elaborates bone corpuscles is yet very imperfectly understood.

The bones are everywhere invested by this membrane, except where they are covered by cartilage at their articular ends. The muscles and their tendons, nearly all, arise from or are inserted into this membrane. In youth, when its regenerative power is greatest, it is thick and very vascular.

The bones of the skull are lined by separ-

* Read before the Metropolitan Medical Association of New York, June 10th, 1891.

ate layers of this membrane; the external being very delicate, but beneath the muscles is intimately adherent to the outer plate of the skull by numerous prolongations from its under surface, which penetrate deeply into the superficial lamellæ of bone.

Its osteogenetic powers are most active in early life and continues until the age of thirty or thirty-five, at which time it yet acts with energy, in elaborating ossific material in fracture, and retains this power until the end of life, to a certain degree, but after thirty-five it is incompetent to restore the loss made by a resected segment of bone.

The skeleton taken as a whole, in early life, owing to the preponderance of organic elements present, is pliant, elastic and vascular; but when middle life is reached, the diaphyses and epiphyses of the long bones have consolidated and the osteo-chondral structures have completely ossified.

The bones now have become more compact and brittle; hence are more liable to complete fracture and tardy repair.

The role of the bone marrow, as a factor in the regenerative process, has not yet been fully determined.

Nerve filaments ramify freely through the periosteum and penetrate the bone. It has recently been demonstrated that the lympatic vessels pierce the lamellæ of the compact substance and are numerous in the cancellous tissue of the articular ends. The healthy bone is everywhere very vascular and when fractured gives rise to a free extravasate.

(*a*) Although the various bones of the body possess physiological and anatomical features common to all, still clinically there is a wide difference in the nature and degree of their regenerative power when they have sustained a lesion of continuity.

(*b*) Manifold and complex are the conditions which favorably or unfavorably influence restorative osteogenesis.

(*c*) Besides, the various anatomical structures and histological elements, each manifest definite and characteristic peculiarities when the seat of pathological processes.

(*d*) The bones of different individuals otherwise healthy, vary greatly in fagility, and in propensity to unite, after fracture.

The failure of securing prompt union, without shortening, may be often readily accounted for by recourse to physics. With a bone as the femur, imbedded and acted upon, by powerful sets of muscles, to retain the broken ends in opposition, in fracture, without unbearable pain to the patient; danger of extensive excoriations and sloughing of the soft parts, is sometimes an almost insurmountable difficulty.

This trouble, in immobilization of the humerus is not encountered, yet it unites with difficulty. The bones of the forearm will, as a rule, unite much more quickly than those of the leg. The broken rib, which is in constant motion, will unite in a week, while a fracture of the inferior maxilla, which can be readjusted and fixed only with great difficulty, readily consolidates.

Fixation and immobilization of the fragments are indispensable in a general way, though, I have several times found, in cases of ununited fractures of the tibia that by removing the splints, retaining the simple bandage and putting the patient on crutches, motion rapidly ceased, at the point of fracture, and the full functions of the limb were quickly restored. Age, climate, season, diet, conditions of health and these species of fracture, all make their impress on the regenerative processes of bone.

There is never anything like full restoration of normal function in a limb, fractured after the meridian of life is reached. In very cold climates and in the frigid season of a temperate climate, it is a well-kown fact that union of a fractured bone is somewhat protracted. Among inmates of penal or pauper institutions, with the maimed after battle in times of war, badly housed and poorly fed, fractures fare very badly.

My experience has been that fractures in women, as a rule, do badly. They seem to occasion more pain and require a much longer time to firmly consolidate. This is notoriously the case in suckling and pregnant women.

Finally, there is a class morbidly prone to fracture. Many cases have come under my observation who have either simultaneously or consecutively fractured the same bones of both limbs, by moderate force. There are two cases now under my care—one a man of fifty, and a woman of fifty-five—with one the fall was but 10 feet, with the other, she simply stumbled. Both had double Colles. The point of fracture being in the same identical part of the radius.

Several cases have come under our observation of consecutive fracture, first of one bone, then at some time later, the same bone on the other side of the body. This is very commonly the case with the patella. So frequently has this consecutive fracturing, particularly of the lower end of the radius, occurred in my experience that just now when so many are ready to commence civil action

for damages, I make it an invariable custom to examine the opposite limb, so that should occasion arise, evidence may be submitted that the limb was normally wanting in firmness and strength.

The bone, anatomically, besides the periosteum is composed of other structures, which separately and collectively, possess singular and unique peculiarities; with which it is important, that at least, we should have a passing acquaintance; before we proceed to the study of practical osteoplasty.

Every bone of the human body except those forming cavities; as the orbital plate of the frontal; the os unguis, the palate vomer and turbinated and the ossicula auditus, are composed essentially of two substances, the compact and the cancellous. The flat bones are formed of two plates, between which is lodged, the cancellous tissue or the diplœ.

The irregular bones are composed mainly of spongy, osseous material, enclosed within a layer of compact tissue.

In the shafts of bones, compact tissue preponderates, while their articular ends are composed mainly of cancellous material.

As we might expect, when their is loss of substance in the shaft, which is enveloped by the periostum regeneration is more prompt and complete, than at the epiphyseal extremities, where this membrane is wanting.

The various elements of bone present a marked difference in their susceptibility to traumatic and pathological influences, in various stages of life, and in certain diseases.

In early childhood, peripheral or parenchymatous changes of the solid structures most frequently occur, as a result of injury, or of tubercular invasion; while in injured adults or those, the victims of constitutional syphilis, the periostial investment is almost invariably, the seat of primary pathological changes. In cancerous disease, destructive changes, indiscriminately spread through the osseous structures, with no marked predilection for any special histological element. It is interesting to note, that in sarcoma of young children when it develops in long shafts, its most frequent original nidus is in the medullary membrane; in close proximity to the distal, epiphyseal line.

The healthy bone taken as a whole, although tolerant of great pressure and concussive force, yet, when exposed to the atmosphere, rough manipulation, very hot or cold liquids, or irritating, antiseptic solutions, is extremely susceptible to irritation, which may terminate in acute or chronic inflammatory changes, that will give rise to very serious molecular transformations.

Hence, the explanation often, for consecutive periostitis, osteitis and osteo-myelitis; the reason why, not infrequently, after antiseptic amputations, with primary union, we so often see, recently, shapely; but irritable stumps, which can endure little, if any pressure and will possibly demand ultimately, consecutive resection.

Nails, ivory pegs, or wire are usually well borne in the cancellous parts, as in resection of the knee-joint, and serve a useful purpose, as accessories to fixation; but as a rule, the compact shafts of bone, violently resent their presence. It is claimed here, that a myelitis is first excited, and thence, by propagation extends into the lacunæ and canals of Havers. I have often observed when the shafts are wired, that there is usually a rapid and extensive suppuration of the overlying, soft parts, regardless of what antiseptic precautions may have been taken.

The diversity of tolerence, in the diaphyseal and ephyseal structures of the bones, will account for the surgeon's chariness, in dealing with fractured shafts of bone, particularly the femur which when fractured, in our time, one would think, by making a simple, compound fracture, the ends might be readily wired or pegged and all future shortening, wholly obviated, without imperilling life.

OSTEOPLASTY AND OSTEO-PLASTIC OPERATIONS.

Osteoplasty consists in such precedures as may be adopted by the surgeon, for injury, deformity, destruction or disease of any part of the osseous system, which are attended with division of the subjacent, or overlying soft parts.

Osteoplastic operations in general, after the scheme of M. Ollier, (Traite experimental et clinique de la Regeneration Des Os), may be divided into three classes, viz: homoœplastic, autoplastic and retoro-plastic; i. e. those in which, 1st. A displaced fragment of bone may be replaced from where it formerly came. 2nd. Those in which osseous tissue is transplanted from one region of the same body to the other; 3rd. Those cases in which bone is taken from one animal and inserted into the tissues of another species.

Ollier declares, very emphatically, after a very long, and most exacting series of experiments and clinical observations, that the two former, only, are at all practicable in surgery, and that any attempt at securing a permanent, durable consolidation by

attempting to engraft the elements of bone from the lower animal to man, must end, inevitably, in failure.

This does not imply, that one cannot insert a fresh fragment of bone, from the animal to man without exciting suppuration, or giving rise to serious disturbances; for one can do this with a piece of cork, metal or wood; but the successful, heterogenous transference of bone element is denied.

Many cases of success have been reported by zealous but indiscreet investigators, who, however, later were compelled to admit failure of assimilation; ultimately the foreign tissue, either giving rise to local ulceration, or undergoing digestion and absorption, through the action of the blood vessel and lymphatics.

The artificial tamponing or packing of bone cavities with decalcified, animal bone chips should scarce come under this category of heterogenous, osteoplastic procedures; as the analogy between this undertaking and the practice of transferring vital tissues, is rather strained and scarcely admissable. In this instance, we are dealing with dead bone; it having been subjected for days, to the macerating action of powerful acids, in dissolving out the lime salts; so that, physically and chemically there is no more comparison between this dry, limeless substance and the living vascular bone, than there is between the normal integament of an animal and the same, when it is transformed into leather. What share a large blood effusive serves, in the way of accellerating or retarding union, at the seat of a fracture, is yet, an mooted question; some alleging that it favors consolidation by undergoing osseous changes, while others regard its presence as an irriant; rather delaying regenerative changes. Latterly, it is said, by some, that when a bone cavity is filled, with aseptic blood and covered in by antiseptic dressings, it will undergo osseous changes and permanently assimilate itself, with the walls of the bone, which enclose it. That a blood-clot will undergo fibrous organization in the healthy subject, has been long known; but that it as a blood clot can take on primary, osseous changes, transforming itself from a fluid into bone, is not in accordance with pathological laws, or those governing regenerative processes.

Autoplastic and homœoplastic operations will, undoubtedly, hereafter play an important role in the surgery of the bones, pathological and traumatic. My own observations in osteoplastic procedures, have been so auspicious, as to induce me, to take such a bold and aggressive attitude, in connection with their application, in disorganizing traumatisms of the limbs; that under no circumstances, whatever, in civil life, do I believe we are now justified, in the performance of an immediate amputation; but, that resection should be always substituted for primary amputation. (Resection as a Substitute for Primary Amputation. *New England Medical Monthly*, July, 1891. By T. H. Manley, M. D.)

As will be seen in my brochure on this subject, that it is maintained, there-in that unless the force itself, at the time of accident, so crushes the limb—amputates it in fact—that it only hangs by a few tendonous shreds, which may be snipped away with the scissors, it should not be disturbed by any instrumental intervention whatever. The intelligent and conservative utilization of osteoplasty, conjoined with antiseptic methods must wholly revolutionize this domain of bone surgery. Hence, measures and methods, which, in their time, had much to commend them, must now be swept aside as antiquated; to make way for the latest innovations, which modern science has placed in our hands, and which we know, by a thorough and extended testing are so far unrivalled in their results.

No longer, will we see the deformity and helplessness, resulting from an irreduceable dislocation, while tenotomy, arthrotomy and ostectomy are so safely and rapidly performed. Certain varieties of paralysis, deformities and atrophies may now be largely obviated, or promptly rendered by a surgical therapy, which heretofore, was attended with imminent peril, both to the limb and even life itself.

It is immaterial whether osseous deformities are congenital or acquired; pathological or traumatic modern measures are equally applicable to all. Nor should we hesitate, because of extremes of age; for, my own results, in osteoclasis or osteoplastic operations on the new-born, in uranoplastic and hare-lip operations, performed, as soon as possible after birth—in three cases, on the second day of life—have been most satisfactory and such as could not have been realized, after advanced ossification was effected.

Homœoplastic operations have a wide range of application, and when performed with a clear idea of what it really is; with a rigid observance of detail and subsequent treatment, the results are all that can be desired.

Every compound fracture; single or

multiple, should usually now be treated, by a homœoplastic method, *i. e.* the displaced ends, or segments of living bones, with the muscular or connective tissue remaining in tact, and an ample blood supply, are brought into opposition, fixed and covered.

Now, these conditions must obtain in every instance, or else, what we do, is not an homœoplastic operation; as the fundamental requirements in any case; are, that the displaced bones have a vascular connection. The more extensive this connection, the less necrosis of the replaced fragments, and the more rapid and complete the cure. This I have verified on many occasions. It was immaterial of what shape or extent the displaced fragment, provided, it had a good grip on the adjacent tissues, it usually took on vitality and assimulated with the bone tissues, from whence it came.

I have never seen a fragment of bone which was wholly detached from a shaft after replacement, take on vitality. These operations failed every time, regardless of conditions.

The importance of bearing this fact in mind, cannot well be over estimated. Just now, when one might be lead to suppose that detached bone will consolidate, as claimed by many late observers. Now, one must not confound the imbedding of an aseptic fragment of bone; as may be done with a tooth, for the genuine ideal restitution of a living fragment, which is capable of regenerating itself.

Among the former, belong to that class of cases of cranial surgery, wherein, fragments or discs of chiselled or trephined bone, after having been removed, for a variable period of time, are replaced and an alleged re-ossificative of bone is effected so that the portal or chasm is filled in.

There can be no question, but when a button of osseous tissue is removed from the skull, it may, after replacement, acquire a more or less firm adhesion; but is no longer a substance, endowed with life and is at best, a foreign body; an incapsulation of it, is mistaken for assimilation and restitution. That this must be the case is evident to any one who will investigate into it precisely, what has been expected. First, the bone is *completely* cut away from the skull. Secondly, it is placed, in an antiseptic liquid, where it remains until it is restored, to fill in the gap, which it occasioned.

The antiseptic fluid simply presents septic infection and nothing more. It does not preserve its vitality; rather, by its permeating, irritant action on the endothelial lining of its reticular, vascular thickness, it thoroughly destroys it. Neither does it interfere with chemical or molecular changes; but on the other hand, by the free chlorine which is liberated, acting on the lime salts of the bone, it accelerates it. Once wholly freed from its vascular and neural structures, physiologically, "bone is no longer bone." This applies to the osseous structures, wherever situated.

Autoplastic operations comprize that class, wherein, we transfer a section of bone from one region to the other, in the same body. It has but a very limited application in the human body, and is employed almost solely, for the purpose of overcoming deformities; as when the nose has been destroyed and we essay to restore it; or construct a substitute. To ensure success in this procedure, the soft parts must be carried along with the bone *en masse* and firmly secured, until the graft has formed firm adhesions and attained an independent existence. Its technique is extremely difficult and complicated; trying to the surgeon; and, without resolution, with more than ordinary fortitude on the part of the patient, is utterly impracticable. Yet, autoplasty constitutes a valuable resource in proper cases, and should be ranked as one of the most important achievements of modern surgery.

Periosteal or heterotopic osteoplasty, consists in the transplantation of periosteal grafts from the shaft of the healthy bones, and sewing them into the tissues, where they are to be utilized as bone, when they have taken in osseous changes and development.

The periosteum being carefully dissected from one side of the convexity of the shaft, is transplanted into the loose cellular tissues, among which, it contracts adhesions and in a comparatively short time, undergoes in its new site, complete osseous transformation; a firm, thick plapue of bone forming within a very short space of time. This procedure has been utilized with great advantage in certain cases attended with loss of bone.

When the priosteum is removed in small sections, no harm will result to the denuded bones; as that part of the membrane remaining, is ample to maintain nutrition and prevent exfoliation.

The object in view, in all osteoplastic operations are to repair, preserve, and utilize bone substance. To give solidity shape, contour and durability to a part. This class of operation is based on extreme

concervation, and requires for its successful attainment, not only the most minute attention to technique and a discriminating judgment, but patience and perseverance as well. As life is not jeopardized, when reasonable precaution is exercised, we are the more justified in always commending a surgical resource, which will usually make no serious impress on vital processes.

There seems little more to learn, in relation to osteogenetic function, but there yet remains, a large field, in which to practically apply the knowledge of it, in our possession. That osteoplastic operation, which will result in the saving of thousands of limbs and joints which has heretofore, been sacrificed; prolong and render life more tolerable, has been incontestably proven.

With this invaluable acquisition in our possession, and our facilities for preserving limbs, heretofore sacrificed our obligations and responsibilities have been greatly augmented.

CHRONIC INGUINAL ADENITIS.

BY H. F. SLIFER, M. D.,

NORTH WALES, PA.

A boy four years of age, with a good history, and healthy parentage, began to fail in general health, during the summer of 1888. He complained of feeling weak, was listless and exceedingly pallid, with loss of appetite, and emaciation without any apparent cause.

This condition continued until November when he began to have pain in the right leg when walking long distances, this gradually grew worse, until it became intense, during the night if he attempted to turn or move the body, he would cry out with pain. His suffering appeared to emanate from the inside of the thigh. Pressure below Poupart's ligament over the pectineal fascia would produce pain, moving the leg was not painful, nor was motion impaired.

At this time no swelling could be detected, both limbs being alike in size and general appearance. After two months had elapsed, the pain in a degree abated. A slight fulness at the upper portion of the pectineal fascia now manifested itself, tender on pressure, but no elevation of temperature nor alteration in the hue of the skin.

One month later, the thigh began swelling at the upper part, which gradually continued down the limb, until the entire thigh was involved, the circumference being 1½ inches greater than that of the opposite side; at no time did it extend beyond the knee.

The original swelling in the groin now increased to a considerable size, forming a tumor below Poupart's ligament and inside of the saphenous opening, two inches in its perpendicular diameter, due to induration of the inguinal glands; this enlargement presented firm resistance to pressure, was tender but not painful, no heat in the parts, nor constitutional fever.

The boy's general health was very much impaired, the appetite remained poor in spite of tonic treatment. He continued pale and emaciated to an alarming extent. I could ascertain no cause for this condition, other than lymphatic disease, confined chiefly to the inguinal glands, although the cervical glands were enlarged at times, but only for a short duration.

The most interesting feature of this case, was its obscure symptoms in the early stage of the disease.

The difficulty in arriving at a proper diagnosis arose from the fact that no local manifestation existed, except pain in the leg, and slight lameness at times, and failure of general health. The nature of the disease, however, became very evident, later on in its course.

A prominent physician, regarded the case one of incipient hip disease, and recommended rest in bed. This opinion was not in accordance with my view of the case. I objected to this procedure, on account of his debilitated condition, and his need of out door air and exercise.

Dr. John B. Deaver, of Philadelphia, saw the boy with me, and after a thorough examination, endorsed the diagnosis of chronic inguinal adenitis.

The pathology of the lymphatic glands is frequently overlooked in children, and its importance under-estimated. The early recognition of this condition may avert serious consequences. The profound anæmia attending these cases reveals a morbid constitution. It is evident that the nutritive functions are disturbed, absorption impeded, and the blood forming organs diseased.

The inflammation may be limited or it may extend to more distant glands. From the glands the disease may be conveyed along the connecting branches, to the deeper set of vessels, and the inflammation may also extend through the intervening tissue. Inflammation of the lymphatic vessels show a tendency to extend to the connective tissue, cellulits is, therefore, almost a constant accompaniment.

Hyperplasia of the cervical glands is common, resulting from eczema of the scalp or face, or from otitis, or any of the forms of stomatitis; the irritation is conducted to the glands through the lymphatic vessels. The same is true of the mesentric, axillary and inguinal glands. The slightest traumatism or irritation, such as solar rays, and friction of clothing, and sting of an insect, or pressure of a shoe, may set up superficial inflammatian, the toxic products of which are absorbed and conveyed to the glands.

Morbid changes in the lymphatics are frequently observed in children whose food is not sufficiently nutritive, or the digestive powers feeble. Children who have been prematurely weaned, and who have been given food that is not adapted to their age. Indeed, any condition interfering with the healthy state of the mucus membrane, or a break in the continuity of tissue anywhere, may permit the invasion of microbes and give rise to adenitis.

The usual termination of chornic adenitis is fibrous induration, caseous or scrofulous degeneration, amyloid degeneration and calcarious infiltration. The fibrous induration is common in the inguinal glands, and is frequently met with in this region without any morbid symptoms, as illustrated in the above case, exhibiting a chronic character from the beginning, and recovering without suppuration or degeneration.

The treatment was conducted on general principles. Directing special attention to his nutrition, proper diet and outdoor exercise. Administering from time to time, such agents as iodide of iron, iodide of potassium, syrup hypophosphites, elixir quinine, iron and strychnia, pepsin, etc. To the glandular induration I applied tincture iodine, mercurial ointment and ext. belladonna, with friction, and ordered the thigh bandaged. Under this treatment the boy gradually improved, but did not fully recover until Feb. 1890. At the present time he is enjoying perfect health.

THE DANGERS OF LEAVING THE PRODUCTS OF INFLAMMATION IN THE FEMALE PELVIS.*

BY CHAS. P. NOBLE, M. D.,

PHILADELPHIA.

The term, product of inflammation, in this paper, will include the various morbid conditions which result primarily or secondarily from pelvic inflammation.

The conditions which come properly under our title are salpingitis, including pyosalpinx, hydrosalpinx, hæmatosalpinx, catarrhal salpingitis with adhesions and without adhesions, ovaritis, including ovarian abscess, intraperitoneal inflammatory exudate, and cellulitis and pelvic abscess. Manifestly the danger to life from these conditions varies widely, and to avoid confusion it will be neccessary to consider them in detail.

The natural history of pyosalpinx is now well known, and the natural termination of the disease is the death of the patient by peritonitis; exceptionally by superinduced general diseases, such as phthisis or Bright's disease. I consider that the foregoing statement requires no support, because evidence upon this point is so demonstrative as to put it beyond dispute. At the same time it is admitted that, as an exceptional occurrence, a pyosalpinx will discharge itself through the uterus, or through the bowel or elsewhere, and a so-called "natural cure" take place. Or, as in other regions of the body, it is possible that the pus may become caseous, and the progress of the disease be arrested. In neither case, however, has a cure resulted—a crippled, occluded, painful, useless appendage remains to torment its possessor. Undoubtedly, then, while a single or double pyosalpinx remains in the pelvis, the danger to be apprehended is invalidism and death. Recurring attacks of peritonitis, any one of which may prove fatal, and gradual failure of the vital powers are only to be prevented by the removal of the diseased organ or organs.

All that has been said of pyosalpinx is even more true of abscess of the ovary, which, generally speaking, runs its course to death much more rapidly. Especially is this true of the puerperal variety.

These conditions result from salpingitis. Both are usually bilateral. Why the occluded tube at one time fills with pus, at another with serum and at another with blood, is an interesting problem yet to be solved. Supposedly it is due to the nature of the infection. Perhaps the occurrence of hæmorrhage into the tube is accidental. (No reference is made to hæmatosalpinx due to congenital or acquired atresia of the uterus or vagina.) While hydrosalpinx and hæmatosalpinx differ, they are alike that in both cases the tube is permanently occluded, at least at its fimbriated end, and, therefore, functionally useless. Hydrosalpinx is essentially a chronic disease, having an indefinite

*Read before the Philadelphia Obstetrical Society.

natural termination. Indeed, it has been argued that hydrosalpinx is a natural cure of salpingitis; to this view it is unnecessary to say that I do not subscribe. The history of hydrosalpinx is characterized by recurring attacks of peritonitis. The danger to life in such attacks is distinctly less than when the cause is pyosalpinx. The fluid contents of the tube are not necessarily septic. At times the uterine end of the tube becomes patulous, the result being the *hydros tubæ profluens* of the older authors. In this way the condition may be relieved, but a useless appendage is left. I have found hydrosalpinx, as a rule, in women in the thirties or forties, who have been invalids for years. Judging from my own experience a fatal termination must be rare; but invalidism has been constant. The effect produced by the menopause upon hydrosalpinx is unsettled. What has been said of hydrosalpinx is largely true of hæmatosalpinx. The fluid, however, is distinctly more septic. Hence the danger to life is distinctly greater. Both hydrosalpinx and hæmatosalpinx permanently destroy the function of the tubes; they produce invalidism by recurrences of peritonitis, and at times death.

This condition may be unilateral or bilateral. It entails suffering rather than endangers life. It is plain that salpingitis with adhesions becomes pyosalpinx, hæmatosalpinx or hydrosalpinx, if, through recurring attacks of inflammation, or through a progress of the catarrh, accumulation of the inflammatory products occur. It is in this way that the condition in question may endanger life. On the one hand the condition may become worse at any time; on the other it is more than questionable if it gets well. Provided the adhesions have occluded the fimbriated extremity, it is a permanently crippled, functionally useless tube. A woman having two occluded tubes must be permanently sterile, unless it be admitted that a tube once occluded by inflammatory exudate can become patulous. Removal of such organs is justified on the ground the they are useless, that their presence entails suffering, and may threaten life at any time through progress of the salpingitis.

At times salpingitis occurs and the tube remains patulous. This may be true even when the tube is bound down by old peritonitis. This class of cases is a most important one. The disease may progress from bad to worse; but this is not the only danger. This is the condition which causes tubal pregnancies, which is an ever-present danger. This condition of the tube often exists on one side, with graver disease, as pyosalpinx, on the other side. Salpingitis with a patulous tube does not endanger life in itself, but may by occasioning tubal pregnancy, or by becoming progressive.

It must not be forgotten that a healthy tube may be present on one side and a diseased tube on the other; thus uterine pregnancy may occur. It is probable, also, that uterine pregnancy may occur where one tube is patulous, even if slight catarrh is present. These considerations render plain supposed remarkable cures of grave tubal diseases, the cure being attested by subsequent pregnancy.

Most cases of chronic ovaritis are caused by salpingitis, and the ovarian condition is strictly subordinate. Chronic ovaritis does occur, however, independent of salpingitis, and is a most distressing condition. It produces invalidism, but never death, unless indirectly. Removal of such ovaries is justifiable after the failure of long-continued palliative treatment. This is likewise true of ovaries of the so-called infantile type—cases of partial development with small tubes and uterus. It is equally true that the removal of such ovaries is unjustifiable unless prolonged, well-directed treatment has been employed without success, and the health of the individual case is seriously compromised by the condition.

As it is impossible to remove these conditions by operation, it is plain that medical means alone can be employed. Intraperitoneal exudate from peritonitis may become purulent, when the pus must be evacuated by section; or it may form adhesions which may or may not cause pain or death, according to their nature. Cellulitis ends by resolution or pelvic abscess.

True pelvic abscess endangers life through sepsis, or peritonitis; should rupture into the peritoneal cavity occur, or by exhaustion where the pus has discharged itself spontaneously into the bowel, bladder or elsewhere. At times a spontaneous cure results, which is permanent, because the functionally active viscera are not necessarily crippled by the disease. Such abscesses are similar to those in other parts of the body, and the surgical law of early evacuation is equally applicable to them. They should be emptied at times through the vagina and at times above the groin; more often, another plan should be pursued. Such patients are often extremely ill when seen by the surgeon, and any error in diagnosis is of great gravity. Hence it is often best to do a median section in order to

exclude pyosalpinx and ovarian abscess, and then, if practicable, to evacuate the pus by a second incision above Poupart's ligament.

Having estimated the special dangers of each of the products of pelvic inflammation, there remain some considerations of a more general character.

One of the most distressing results of the failure to remove, especially the graver products of pelvic inflammation, is the occurrence of acute spreading peritonitis. Oftentimes the surgeon sees the patient for the first time when she is in this condition, she having had pelvic inflammation for years. Operation may be offered and done "as a last resort," "to give the patient a chance," and when done under these circumstances death usually follows. What is the cause of these deaths? Who should take the responsibility for these deaths—the surgeon, or the man who, through mistaken teachings, has kept these unfortunate women upon a so-called conservative treatment? The answer is plain—falsely called conservative teaching is responsible for these years of invalidism, with final death.

A class of cases is met with in which the nutrition is depraved, the nervous system has lost tone, and the digestive system is seriously disordered. Such women are best denominated "wrecks." They have had years of so-called conservative treatment, which has proved a dismal failure. Often the local pelvic disease is not great—chronic ovaritis, ill-developed pelvic organs, adherent appendages, or hydrosalpinx. In rare cases pyosalpinx is the condition found; but when pus is present, death usually results too quickly for the profound alterations in nutrition to occur which characterizes this class of women. When such women are operated upon and the pelvic disease removed, the health improves slowly and recovery is often incomplete. Such women often complain of pelvic pain after operation, which is due to the condition of the pelvic nerves, and the general nervous system produced by long years of invalidism. Such cases are often spoken of as demonstrating the failure of the operation to cure. Is not the failure to be attributed to delay—delay till complete restoration to health is well nigh impossible? Undoubtedly the sufferings of this class of women is greater (because longer continued) than any other. It is to be hoped that in the future timely operation will restore them to robust health.

Experience has proved that tubal pregnancy occurs in slightly diseased patulous tubes; the vibratile spermatozoa gain access to the tube, but the impregnated ovum is not propelled into the uterus, owing to lack of vermicular motion in the tube itself, or to the destruction of the ciliated tubal epithelium, or to partial strictures in the tube. This is an ever-present danger when one of the tubes is slightly diseased, no matter whether the other is healthy or profoundly altered by disease. Parvin estimates that one extra-uterine pregnancy occurs for every four hundred pregnancies, and the experience of to-day indicates that his estimate is accurate. What, then, is the probability of tubal pregnancy when a patulous, slightly inflamed tube exists? This question is certainly worthy of consideration in deciding for or against operation in the special class of cases in question. If such tubes were removed, tubal pregnancy could not occur.

The ætiology of tumors is undoubtedly obscure, and perhaps impossible to demonstrate. I have found small, thin-walled ovarian tumors and broad ligament cysts not infrequently when operating for long-standing salpingitis. It has seemed to me that in certain cases the relation was that of cause and effect.

Opposition to the removal of the uterine appendages is based, usually upon the ground that thereby the possibility of the occurrence of pregnancy is taken away. As the function of an occluded tube is destroyed, the objection is well grounded only in reference to the removal of healthy tubes, or slightly inflamed tubes which are patulous. Practically it refers only to the removal of slightly inflamed tubes because no one advocates the removal of healthy organs.

There is no doubt that pregnancy can take place through a slightly inflamed patulous tube; but, as has been pointed out, the pregnancy is likely to be tubal. Under the circumstances pregnancy is scarcely desirable. And this leads to a consideration of the general subject of pregnancy as complicated by salpingitis in its various forms, and by the adhesions resulting from peritonitis. Necessarily one tube must be healthy, or at least patulous, for pregnancy to take place. Instances of pregnancy occurring during the course of serious inflammation, with occlusion of both tubes, are clearly instances of mistaken diagnosis. Upon one side, at least, a mass of peritoneal exudate, or a mass composed of agglutinated bowels, has been mistaken for a distended tube. Given a functionally active ovary with a patulous tube, and pregnancy is possible. The opposite appendage may be seriously diseased—the tube inflamed and bound down, distended

with serum, blood or pus; or the ovary the seat of an abscess or an ovarian tumor. Under such circumstances, is pregnancy to be desired? On the other hand, is not the life of the woman seriously compromised by its occurrence, and especially by the processes of parturition? Is rupture or bruising of the diseased appendage, during labor, with dangerous or fatal peritonitis, to be invited? Or, on the other hand, is it not the part of wisdom to remove the diseased and dangerous structures, and to leave the healthy appendage to provide for future pregnancy? (The indications for unilateral or bilateral operations are omitted as not germane to the subject.)

Conservatism is the part of wisdom; it is that which preserves. In medicine this banner is raised by those who cry "hands off." It is a pertinent question as to whether their course is the part of wisdom, as to whether they really conserve the interests of those concerned—the sick. It seems plain to me that the considerations already presented amply prove that true conservatism lies not in the line of "let alone," but in the line of active surgical treatment. By the let-alone plan diseased organs are preserved that are functionally useless, that destroy the health, or cause the death of their unhapppy possessors. By early operations these diseased organs can be removed, women be restored to health and usefulness, countless years of invalidism be avoided, and many untimely deaths be prevented.

It is only just to say that this paper is based almost exclusively upon the study of cases of pelvic inflammation coming under my own observation. In the beginning my position was exactly the reverse of what it is now; but a widening of experience and the logic of facts forced an acceptance of the views set forth. My own experience has demonstrated to my own satisfaction that the results of (what is claimed to be) conservative treatment are at best negative, and commonly positively bad. In my more recent work many instances of the disastrous results of let-alone treatment in the hands of others have come under my observation.

Conclusions.—All cases of pyosalpinx, abscess of the ovary, hæmatosalpinx, and hydrosalpinx demand operation, unless contra-indicated by grave organic disease of the vital organs. The diseased organs should be removed. When gonorrhœa is the cause of the disease, the operation should be bilateral, even if one of the tubes is healthy. Operation is demanded because these conditions render the uterine appendages functionally useless, destroy health and threaten life.

All cases of occluded, adherent Fallopian tubes demand operation on practically the same grounds. In these cases the probability of death is less, but of invalidism equally great. The earlier the operation the greater the prospect of a cure.

All cases of true pelvic abscess demand operation.

Certain cases of chronic ovaritis and of partial development of the sexual organs demand operation—where health is seriously impaired and medical treatment continued over one or more years has failed.

Finally, the question is submitted for discussion as to the proper treatment of salpingitis with a patulous tube, taking into consideration the facts that at times a cure results, that at times the disease is progressive, and especially that this condition is the determining cause of tubal pregnancy.

Society Reports.

PROCEEDINGS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

Dr. Chas. P. Noble read a paper on "The Dangers of Leaving the Products of Inflammation in the Female Pelvis (see p. ——.)

Dr. Wm. H. Parish:—The conclusions presented are very safe and proper, and I have no unfavorable criticism to make. Probably most operators agree as to the propriety of operation, but the difficulty is to agree as to the condition actually present. As we all know, in a number of instances eminent gynæcologists have recommended and urged removal of the appendages as an absolute necessity, stating that sterility was present and that the future of the patient was one of great danger. And yet in some of these cases the patients have passed to a condition of fair health, have borne children and continued to enjoy a fair amount of health. This fact, however, has had an unfavorable influence upon the profession; while the publication of such cases should render the gynæcologist particularly careful in his examinations, and show the necessity of becoming a diagnostician as well as an operator.

The difficulty in diagnosing the condition present is considerable. I believe in giving the benefit of the doubt to the patient, and opening the abdomen and removing the

tubes or ovaries, or both. I am not altogether in harmony with the sentiment that it makes little difference whether we diagnose the exact condition or not. I recognize the impossibility of diagnosing the exact condition in many cases, but we should arrive at as close a diagnosis as possible. We should study the symptoms and compare them with the results found at the operation.

There are cases on the border line. If the patient's health is greatly disturbed and she has recurrent attacks of peritonitis, rendering her more or less of an invalid, it is not necessary to wait to demonstrate the presence of pus. The recurrent attacks of inflammation are sufficient to justify the removal of the appendages.

I have seen some curious instances of the difficulties attending the determination of the propriety of operation in individual cases. Not long ago, a prominent lady in this city had suffered for years prior to marriage with intermenstrual attacks of severe pain. The attacks continued after marriage, and a well-known gynæcologist was sent for. After one of these attacks of agony, he believed that she had an extra-uterine pregnancy. Time showed that this was not correct. Operation was, however, recommended. She then visited an eminent member of the profession in a neigboring city who advised her to leave that city very promptly, or she would have her ovaries taken out. He also said that she could not become pregnant. It happened that at the time he made the examination she was pregnant. She returned to this city, and was placed under my care, and a few weeks ago was delivered without difficulty. She had an attack of local peritonitis after delivery, but is now in fair health. She has a diseased ovary and tube on one side, and it may be necessary to operate on this patient. She may have trouble in the future, but this case shows that we cannot determine the necessity for operation in all cases. The point to be particularly dwelt upon is that the general profession is not justified in delaying or preventing operation when recommended by those who have the best opportunities for determining the propriety of operation. The tendency of many patients is to pass from one consultant to another, expecting to find some one who will favor delay. The result is that the delay complicates the condition seriously. Frequently the practitioner says that the operation was unjustifiable, and the fact that death follows shows that he was right in not wanting the operation done. I have heard a busy practitioner say that he had never had a case operated on for abdominal or pelvic conditions that did not die. I said to him: "Probably it is your fault, and not that of the operator." That is frequently the case.

As to pelvic cellulitis, I am sure that Dr. Noble agrees with me that it is a rare condition, and that it is seldom productive of abscess. That it does occur occasionally is true. Chronic pelvic abscess is almost a myth. It may exist as the result of tuberculosis, or be dependent upon disease of the lymphatic glands. Cellulitis, I think, exists only as an acute process following sepsis or labor, and then only occasionally.

In the last few weeks I have seen an extra-uterine pregnancy in a moribund patient, who had been treated by two practitioners for four months as a case of pelvic cellulitis. The patient died from the internal hæmorrhage.

There is one condition of the appendages which I think Dr. Noble did not dwell upon sufficiently, and that is tubercular disease of the appendages. There is strong reason to believe that in a few instances general tuberculosis has begun as a tubercular condition of the appendages. In such cases operation might cure absolutely the patient, or at any rate it might delay for a long time the extension of the tubercular condition to other portions of the body.

Dr. B. F. Baer:—I agree in the main with what Dr. Noble has written. I have passed through the same experience that he has with regard to so-called conservatism in the treatment of inflammatory disease of the ovaries and tubes, and now operate early where operation is required; but at the same time we must not forget that we may operate too soon or operate in cases where the disease is so slight that the patient might go through life and escape serious trouble. Great care and attention should be given to diagnosis, for that must decide the treatment.

Dr. Noble believes that most cases of pelvic disease are due to chronic salpingitis. That may be true, but I doubt it. I find many cases of disease of the ovaries with the tubes apparently healthy. This is especially the case in hæmatoma of the ovaries.

The suggestion that slightly diseased tubes should be removed for the prevention of extra-uterine pregnancy, I think a little too strong.

We do not know certainly that extra-uterine pregnancy is always caused by diseased tubes, nor to what extent the tube must be diseased to bring about that grave accident. There should be symptoms and

physical signs of disease before we operate.

The cases he has characterized as wrecks, require very careful consideration. I have, on several occasions, operated in this class of cases after prolonged palliative treatment had failed to be of more than temporary benefit, and have been sorry that I did so, and I have become very wary of them. If these cases could be operated early, much suffering might be avoided and cure effected, but, as I said, I have learned to regard removal of the ovaries as a means of cure for a broken nervous system with doubt.

In regard to the removal of undeveloped ovaries for amenorrhœa, I agree with Dr. Noble, but this also must not be accepted too literally, for in some cases the menstrual molimina ceases after a while, and the function of ovulation is then quiet. In such cases the removal of the organs would not be necessary. But if the patient is chlorotic and the effort at ovulation continues it would be better if the ovaries were removed.

I agree with Dr. Parish in regard to cellulitis or so-called true pelvic abscess. It is very rare. Some years ago cases of chronic pelvic abscess were met with, but since we have learned to operate early the true pathology has been found to originate in disease of the tubes or ovaries as to the starting point and focus, followed by peritonitis and not cellulitis, except as a secondary or minor complication.

The suggestion that an exploratory laparotomy be first made to determine whether the case be a true pelvic abscess or not, and that if it is found to be such to make an incision along Poupart's ligament, is good, for it will not often be necessary to make the second incision, because by the first the trouble will be found within the peritoneal cavity.

Dr. J. Price :—The ground has been well covered. I am glad to hear Dr. Parish and Dr. Baer speak so plainly on pelvic abscess, a subject which has given us much anxiety and not a little condemnation.

Dr. Noble has called attention to the deaths, and has alluded to the dangers of delay. I have in my hand several letters bearing on this point. One is from a patient. She says: "Dr. —— opened my abdomen for pelvic abscess, but found a mass so large that he could not remove it. He then made an incision in the vagina, and there still exists an opening in my bowel which communicates with the opening in the vagina, through which I pass my motions." In the *American Journal of Obstetrics*, a year ago, Emmett reported cases in which he opened the abdomen and found the adhesions so extensive that he incised the vaginal vault. It has been my misfortune to have many of these cases to deal with.

In all pelvic cases delay not only complicates the operation but diminishes the prospect of a cure. Delay is responsible for that group of cases known as imperfect cures, and these have been cited in opposition to all pelvic surgery. These results are sequelæ of the delay, and not of the operation. If you have to denude the pelvic cavity of peritonæum, or if it has disappeared, there must be adhesions from which the patient may continue to suffer. These are the cases in which a second operation is required for the relief of the adhesions. The second operation cures; the first could not. It saved life, but it could not cure the woman and make her sound and healthy.

Dr. Barton C. Hirst :—I am strongly at variance with some of the views expressed in this paper. That pyosalpinx and ovarian abscess demand operation will generally be admitted, but that hæmatosalpinx, hydrosalpinx and adherent tubes *demand* an abdominal section will not be allowed by many gynæcologists, or by the bulk of general practitioners, who, by the way, have better judgment in these matters than they are often credited with in special societies like this. There are two dangers, I think, which the abdominal surgeon should carefully guard himself against. One is the desire to operate as often as possible, and the other is the disposition to underestimate the dangers of abdominal section. As an illustration of the first, not long ago I heard a prominent gynæcologist describe his sensations while operating. During the progress of the operation he was anxious; he would be glad when it was over; but directly after a rest and dinner he would want to do another. As an illustration of the second, I heard from one gentleman this evening that the mortality of operations for tubal diseases is practically nil, and from another that the mortality may be expressed by one in five hundred. It is, I believe, a knowledge of this tendency that often deters the general practitioner from sending cases to the gynæcologist when he should. My judgment is that these cases of hæmatosalpinx, hydrosalpinx and adherent tubes *may require* operation by the development of symptoms, but that they *demand* it without reservation is not correct. Circumstances should govern us. In women at the Philadelphia Hospital I have operated on slighter grounds than I would in private practice. These women, by slight pelvic dis-

ease, are incapacitated for their work, and their pelvic disease means not only invalidism but pauperism. I have had lately, in private practice—to illustrate what I mean—three women with bad pelvic disease. The tubes are distended on both sides, and in one case there may be pus. These women date their trouble back some years, one twelve years, to a neglected confinement. That woman is somewhat of an invalid, but in good circumstances, and the mother of a large family. She goes to Europe every summer, takes long walks in Switzerland, and enjoys life. I should not dream of operating unless she presented more serious symptoms. The only symptom that annoys her is a recurrent severe hæmorrhage from the uterus at long intervals. I have seen a number of cases in which this symptom was present, but it can be checked by proper treatment.

I am astonished to hear so little said about the mortality of the operation. There is probably not one present who has not seen women die from the operation, who would have lived indefinitely with the condition for which the operation was done. It is a mistake to omit all mention of this.

To my mind it is wrong to lay down a dogmatic rule in regard to operating on these cases. Even where there is pus there are really few who die directly from its presence, but it is true that the great majority come to an operation because their symptoms demand it. In considering other tubal diseases each case must be judged on its own merits, and the man will not do full justice to his patients who is guided by the invariable rule that pelvic inflammation involving any lesion in the tubes demands abdominal section.

In regard to abdominal section for amenorrhœa with ill-developed ovaries, I cannot understand the necessity for operation. There is, however, a condition which justifies operation. There are women who have ill-developed uteri and tubes, but well-developed ovaries. Such persons may suffer intense pain at the menstrual periods. We find the ovaries enlarged. In one such case, that of a girl of 20 years, treated by myself and two others without relief, I operated and found the ovaries unusally large. I also found a corpus luteum as large as that of pregnancy, and yet the girl never menstruated. Her uterus and tubes were unable to drain off the pelvic congestion which occurred every month. In such cases the operation may be demanded, but in amenorrhœa, with imperfect development of the whole sexual apparatus, I do not see the necessity for such radical treatment.

Dr. Chas. P. Noble:—May I ask a question? I would ask Dr. Hirst on what ground he would desire to preserve the tubes where they are occluded and filled with fluid, whether serum or pus? Of what benefit are such organs to a woman?

Dr. Barton C. Hirst:—In all these operations there is a possibility of a fatal termination which should not be lost sight of. Where a woman does not suffer seriously and is able to enjoy life, I should not operate. In the case to which I referred the uterus is firmly bound down. There are tumors on each side of it, and the tubes are distended with fluid; and I should not be surprised if some inspissated pus were present. Even in that case I should not operate unless the woman was absolutely an invalid, or had recurrent attacks of peritonitis.

Dr. W. H. Parish:—Dr. Hirst seems to stand up here as the representative of the general profession to defend it. Dr. Hirst well knows that the remarks that have been made have been directed against certain general practioners. He knows very well that the members of this society are highly appreciative of the general practitioner. I say this because the remarks of Dr. Hirst, when in print, would make it look as if we felt ourselves superior to the general practitioner.

As Dr. Hirst has said, some patients die that might have lived for years, but most of these die because the operation was done too late. That is the reason that I referred to the dangers attending delay. It is more important that we should dwell upon this fact than upon the fact that some die where the lesion is not severe. The number that die from delay or because a necessary operation was not performed is much greater than the number who die from unnecessary operation.

Dr. J. M. Baldy:—I hardly think that any one would hesitate when pus is present, but we must recognize that occasionally the patient may have something to say on the subject. I do not believe that all cases of pyosalpinx die quickly as the author of the paper said. I have operated on cases where pus had been present for eight or ten years. Pyosalpinx can be a chronic as well as an acute trouble. I do not mean that we should not operate. If I had my choice I should operate in every case; but if the woman objected, I would not feel that she must necessarily die. A certain number will, it is true, die quickly, but not the majority.

In regard to the collections of fluid in oc-

cluded tubes, I would say that I do not believe in hæmatosalpinx. With very few exceptions these are cases of extra-uterine pregnancy. Hydrosalpinx is hardly ever fatal. We do not always operate for fatal diseases. As far as the operation is concerned a case may die that should not die. But where one case dies thus, there are hundreds that suffer the tortures of the damned. Sometimes they suffer more from hydrosalpinx than from pyosalpinx. I should advise that cases of hydrosalpinx be operated upon, and I feel that such tubes could be removed with as much safety as simple ovarian cysts—that is, with no mortality. The disease is not liable to kill unless there are repeated attacks of peritonitis. The patient will then suffer as much risk from the peritonitis as from the operation, but instead of running the risk once she runs it three, fifteen or twenty times in as many years.

I can see no reason for treating amenorrhœa by abdominal section or by medicine. If there is amenorrhœa, nature has good reason for it. It is not a local condition. I see no reason for interfering, except with general constitutional measures. If the woman suffers, she does not suffer from the amenorrhœa, but from other conditions. The amenorrhœa is merely a symptom and should be let alone. Many of these cases with ill-developed appendages and uteri have other symptoms than amenorrhœa. If they have great pain, and you operate for that, I have nothing to say against the operation. It is sometimes justifiable.

True pelvic abscess may be met with, but with an experience of three or four hundred sections in my own and other hands, I have not met with it.

In regard to cases of salpingitis, especially those with patulous tubes, possibly this may be one of the causes of extra-uterine pregnancy; but if we are going to remove such tubes to prevent extra-uterine pregnancy, we shall remove half of the tubes in the country. Most married women have inflammation of the tube at some time or other. If we could pick out the cases that are going to have extra-uterine pregnancy, the operation would be proper. In inflamed tubes, with patulous openings, pregnancy may cause complications, but acute or sub-acute inflammation in any part will get well, and I see no reason for operation in these cases until the patient has gone through a long course of treatment. My experience is that most of these women suffer as much after operation as before, so that the trouble, apparently, has not been in the tube alone. It has been a case of mistaken diagnosis. I do not believe that in the vast majority of instances chronic ovaritis is due to salpingitis, nor do I believe that we can always tell chronic ovaritis when we have the ovaries in our hands. The diagnosis is made on the symptoms, and there is nothing more deceptive than symptomology in these troubles. Where there is the greatest disease there may be few symptoms, and where there is little disease there may be severe symptoms.

The "wrecks" I often feel like letting alone. Operation in these cases brings little benefit to the patient and little credit to the operator. The mortality will always be greater, and the results less satisfactory.

DR. M. PRICE:—I want to refer to Dr. Hirst's remarks in regard to the country practitioner. In my experience the country practitioner has made the diagnosis and told me what he wanted done. There are few that do not know about pelvic troubles. There is no danger that he will select cases that can go to Europe every summer and walk over the mountainous districts of Switzerland. In the cases that I have seen, the patient insists upon operation. I believe firmly that not a single case of the description laid down in that particular list should die. I never saw one die. The cases that die are those which come in a dying condition. There are a number of cases dying, but it is the operator's fault. We all make mistakes, but I have never operated without knowing that there was something to operate for.

DR. JOSEPH HOFFMAN:—When a man is uncertain of the rules that require him to operate, he must make many mistakes. The man who looks for success must have his reasons and rules before him subject to variation. He must know what cases will give mortality. We have no business to say that hæmatosalpinx and hydrosalpinx will give mortality when simple ovarian cyst does not. In all cases the mortality should not exceed three or four per cent.

How many more go down without operation.

It is a mistake to assume that hydrosalpinx is inoffensive. I have known the most serious symptoms to come on in these cases. Hæmatosalpinx, hydrosalpinx and pyosalpinx are interchangeable. We do not know where the margins lap, we do not know when one will pass into the other. I have seen hæmatosalpinx that was not extra-uterine pregnancy.

In regard to pelvic cellulitis, so-called, Bernutz holds that out of the cases he has

examined post-mortem, pelvi-peritonitis is the cause of visceral adhesions, and is symptomatic of tubal and ovarian disease. Until we have an experience approaching that of that man in pathology, it is fair to believe that there is some error in the opinion. Those who have looked up the doctrine of Nonat have found it wiped out. I do not assert that there may not be peri-uterine inflammation following confinement, but this is not to be considered chronic pelvic cellulitis, for it is a broad-ligament involvement. Inflammation after confinement probably originates in the uterus, but no one will ever find a chronic inflammation of that sort. There is simply an effusion which will pass away. If we use the term cellulitis in this sense, it is misleading.

I think with Dr. Baldy that it is unjustifiable to deal with amenorrhœa as a surgical affection. When a patient run down by some prolonged disease comes with amenorrhœa, we do not think of operation—we treat her by hygienic measures. If the organs are infantile, there is no reason for menstruation.

In regard to carrying pus tubes a lifetime without bad result, it has been demonstrated beyond question that although pus may be carried a long time, yet it always makes disease somewhere else. Pus anywhere else in the body is always let out—why not in the pelvis?

Dr. G. Betton Massey:—With all due deference to Dr. Noble, I must say that the paper appeared to me very much like a patent medicine advertisement. We are given a succint list of diseases and are told to take for each—not so-and-so's bitters, but an operation. The author of the paper has perhaps unconsciously, fallen into the error of looking upon one thing as a panacea, giving routine directions for treatment by an operation which runs the risk of killing the patient, and this in spite of the impossibility of exact diagnosis. As has been so often said on this floor, very few of these conditions can be accurately diagnosed, with the exception, perhaps, of large pus tubes or cystic ovaries.

To go to the root of the matter, most of these diseases are, it is true, one or another phase of inflammation, but is it not the duty of the physician to combat this process rather than remove some of its products? The argument of the paper tends to obscure the fact that, taken in time, this process can be arrested by local and general treatment.

Gynæcologists should pause and reflect on the singular extravagance of the position assumed by some. In what other specialty are the products of inflammation cut out unless they are encysted or purulent? We should combat inflammation itself rather than amputate a part because it is inflamed. Should we cut out a tube because it is adherent, if the woman can be freed from all pain or trouble referable to it? We do not cut out a lung because it is adherent to the chest wall as a result of pleurisy. I maintain that if we can relieve the patient permanently there is no occasion for more radical measures in any of the conditions mentioned in the paper.

Dr. C. P. Noble:—My object in reading this paper was to elicit discussion on the broad subject of pelvic inflammation, and I am glad that its object has been accomplished—discussion elicited. I was led to write it by the remarkable communication which appeared in the *British Medical Journal* by two "obstetric physicians," Drs. Williams and Champneys, and by the paper recently read by Dr. Baldy in this Society. The English physicians utterly fail to appreciate the advances made in gynæcology during the past fifteen years. They accept ovariotomy as justifiable, but reject operation for the removal of diseased uterine appendages. Dr. Baldy, also appears to be very doubtful of the grounds on which he stands. Under the circumstances, it seemed to me that a general discussion of the subject would be of advantage to us all. Dr. Parish referred to mistakes in diagnosis and prognosis. I alluded to that in my paper, incidentally. There is no doubt that such errors reflect badly upon surgery, and they discourage the general practitioner from accepting the teachings of to-day. Although he is wise in his own department, he is not necessarily an expert in pelvic disease. My own opinion in regard to these mistakes is that the diagnosis is made too quickly, often from a single examination. Mistakes are made most easily if the examination is made shortly after an acute attack of peritonitis. Finding a fixed mass the examiner concludes that it is a distended tube or a bound-down ovarian tumor, whereas it may simply be an exudate around the tube or ovary. Of course, if the patient is dying from the condition, we do not care what it is, we have to operate to save life; otherwise, the physician should aim at exact diagnosis. The mistakes in prognosis in regard to sterility usually come about in this way. There is found a mass of exudate, or the bowels are bound together, and it is concluded that the tubes are distended and occluded, and a prognosis of sterility is given, although the conditions present need not en-

tail sterility. Such mistakes can only be avoided by greater care, especially by a longer study of cases before giving an opinion. It is difficult to speak concerning pelvic cellulitis, and especially pelvic abscess, before this Society, because it is a fashion here to distort one's statements concerning these conditions. No one believes more strongly than I do that the ordinary form of pelvic inflammation is salpingitis with peritonitis, yet I have seen pelvic cellulitis and true pelvic abscess. Because some gentleman has not seen it, am I to doubt the evidence of my own senses? Those gentlemen who say that it does not occur make some egregious blunders. Those cases in which inflammation occurs after labor, with great masses of exudate in the pelvis, and the women get well and bear children, are cases of acute puerperal cellulitis. These masses are exudates. In the processes of labor, lacerations occur; and if there is infection, cellulitis may follow. I have seen three true pelvic abscesses within two years, in which the abdomen was opened and nothing found the matter with the tubes. I shall report these in full at an early day. At the same time, it is not the less true that in many cases of puerperal pelvic inflammation cellulitis does not occur. The inflammation is confined to the vagina or to the uterus; or it spreads along the tubes, and at times to the peritoneum. The very wonderful researches of Bernutz have been referred to wrongly to-night. Bernutz did not claim that pelvic abscess does not occur, but that cellulitis does not take place, as Nonat held, in the cellular tissue, between the uterus and its peritoneal covering and immediately adjacent to the cervix. He admits that we have what he calls iliac phlegmon and abscess in the broad ligament and peri-rectal connective tissue. His claim is that what he and we recognize as tubal disease is not cellulitis of the tissue between the uterus and the peritoneum, as is claimed by Nonat. All honor to him for demonstrating the fact! I have also seen cellulitis after laparotomy, where the stump has become infected. I am sure that many cases of so-called hæmatoma after section, as mentioned by Tait, are nothing but cellulitis, possibly with peritonitis, of the broad ligament—an infected pedicle. I did an exploratory section in one case that demonstrated this absolutely.

With regard to salpingitis as a cause of ovaritis, I said that most cases of *ovaritis* were caused by salpingitis, not most cases of ovarian disease. I would not at all hold that very many cases of ovarian disease, cystic ovaries or ovarian hæmatoma or cystoma are caused by tubal disease.

In the paper I carefully abstained from dogmatism regarding the proper treatment of salpingitis with patulous tubes, because I feel that the subject is debatable. I should hesitate to operate in all cases of slight tubal disease. But these conditions are not the simple affections that we are apt to consider them, and they may lead to serious trouble. In reference to Dr. Hirst's remarks, not to remove pelvic disease unless of the gravest character, I have only to say that I differ with Dr. Hirst. I think that it is such teaching as his that is the cause of most of the deaths in abdominal surgery. In these cases of slight disease there should be practically no mortality. If the vital organs were healthy I should never expect death; and the operation should not be done unless the viscera be healthy. One death in several hundred would be an ample allowance. This certainly would not weigh against the many deaths which would occur in such cases from neglect.

Dr. Baldy states that I hold that patients with pyosalpinx die quickly. In general the course of pelvic inflammation, complicated with pus, is not a long one, but there are exceptions. I said in the paper that some cases of pyosalpinx get relatively well, although crippled and useless appendages were left in the pelvis; and I have removed a tube containing a pint of pus that the woman had carried for seventeen years. Another was of eight years' duration. The first woman was an absolute wreck. For two years she has been relatively well.

Amenorrhœa was not referred to in the paper. The cases referred to were those in which menstruation does occur, although imperfectly, and with great pain; and often intermenstrual pain is present. Where the lack of development is extreme we have amenorrhœa, but I should think that such cases would seldom present symptoms calling for removal of the appendages. The cases that I have seen have been great sufferers and have been subjected to all forms of palliative treatment without benefit.

I did not refer to wrecks from other causes than pelvic disease. It would be folly to remove the tubes and ovaries in wrecks from other causes. The results in these cases are not brilliant, but have been good enough to encourage me to continue to operate, always giving a guarded prognosis as to final cure, and insisting upon the necessity for prolonged treatment after the operation.

I do not know that I have anything to say in answer to Dr. Massey's remarks. His arguments doubtless appear cogent to him, or he would not advance them, but to me they are pointless. It seems to me that he overlooks entirely the natural history of pelvic inflammation and also the results and dangers that follow, if diseased structures are left in the pelvis.

Selected Formulæ.

ERYSIPELAS.

Dr. Rothe (*British and Colonial Druggist*) has used an ointment prepared as follows:

℞

Creolin	1½ parts.
Creta præp.	
Axung. porc. aa	15 "
Ol. menth. pip.	5 drops.

This is spread in the thickness of the blade of a knife over the diseased parts twice or three times a day, a thin layer of cotton-wool being applied as a covering.

ABORTIVE TREATMENT OF HERPES.

Leloir (*La Tribune Médicale*) recommends a small piece of gauze soaked in one of the following solutions to be applied:

℞

Resorcin	grammes 100.
Alcohol (90 per cent.)	" 2.

M.

Or,

℞

Menthol	grammes 1.
Alcohol (60 per cent.)	" 100.

If there is much pain use can be made of

℞

Cocainæ muriat.	gramme 1.
Ext. cannabis indic.	grammes 10.
Essen. menth. pip.	" 10.
Alcoholis (90 per cent)	" 100.

PARASITICIDE OINTMENT.

L'Union Médicale gives the following ointment for the destruction of parasites:

℞

Salicylic acid	45 grains.
Borax	15 grains.
Balsam of Peru	30 grains.
Ethereal essence of anise	5 drops.
Essence of bergamot	20 drops.
Vaselin	6 drachms.

Make into an ointment and apply to the part affected.

GARGLE TO PREVENT DENTAL CARIES.

℞

Tannin	5 gm.
Tincture of iodine	
Tinct. of myrrh, aa	2½ gm.
Iodide of potassium	1 gm.
Rose water	180 gm. M.

S. A teaspoonful in a glass of water, to be gargled every morning.

—*Nouveaux Rémedies.*

NIGHT-SWEATS.

The following prescriptions for the relief of night-sweats are published in the *Revue Général de Clinique et de Thérapeutiqué*:

℞

Sulphate or tannate of quinine	gr. xv.
Powdered ergot	gr. xxx.

Divide into four powders, and take two or three in the course of the day.

This prescription is also valuable in cases having a tendency to hæmoptysis. Or,

℞

Powdered agaricine	3j.

Make into four powders, and take one powder at night.

℞

Powdered agaricine	3j.
Powdered belladonna root	gr. vij.

Divide into four powders, take one powder at night.

℞

Powdered agaricine	3j.
Tannin	3j.

Make into four powders, and take one or two powders a day.

—*Medical News.*

INDIGESTION WITH CONSTIPATION AND FLATULENCY.

A favorite perscription of the outdoor medical department of the Jefferson Medical College Hospital, in cases of difficult digestion accompanied by constipation and flatulency, is the following:

℞

Tinct. nucis vomicæ	
Tinct. belladonna	
Tinct. physostigmatis, aa	f3ij.
Ext. cascaræ fluid	f3vj.
Ext. erythroxylon, q. s.	f3iij.

M. Sig. A teaspoonful after each meal.

NEW TREATMENT OF HERPES ZOSTER.

MIXTURE.

℞

Extract gelsemium, Sodium sulpho-carbolate } of each	4 grammes.
Distilled water	90 grammes.

Teaspoonful every two hours.

At the same time 5 drops tincture of belladonna are administered every two hours until a slight dryness of the pharynx is experienced.

LOTION.

℞

Lead acetate, Powdered alum } of each	4 grammes.
Distilled water	120 grammes.

M. Sig. Externally.

Compresses moistened with this solution are applied to the affected parts, and renewed every two hours. According to the author, pain disappears within a few hours, and the disease is considerably shortened by this treatment.—*Merck's Bulletin.*

LOCAL ANÆSTHETIC FOR COMPARATIVELY PAINLESS EXTRACTION OF TEETH.

As one of the great corps of "country doctors" who act in almost every capacity for their patrons, I submit the following formula as a local anæsthetic for the almost painless extraction of teeth:

℞

Hydrochlorate cocaine	5 parts.
Crystal. carbolic acid	6 parts.
Pine gum camphor	6 parts.
95 per cent. alcohol q. s. to make	120 parts.

Mix.

Inject one to three minims of this mixture, with a hypodermic syringe, deeply into the gum on the inner and outer sides of the tooth. Apply over the gum a piece of absorbent cotton wet in the solution. Wait four to five minutes. The gum can then be freely incised, and the tooth drawn with a minimum amount of pain. Try it.—J. Wilton Hope, M. D., *Va. Med. Monthly.*

BROMIDES WITH BISMUTH AND NAPHTHOL.

Pharmacists have been surprised of late at the number of prescriptions they have had of the bromides united with bismuth and naphthol. They have now discovered the cause. M. Féré, of the Salpêtrière, finding that large doses of bromide of potassium disagreed with such of his nervous patients as had gastric troubles, sought for a combination which would enable him to give the bromides with impunity. He finally settled upon the following formula:

℞

Bromide of potassium	6 grammes.
Beta-naphthol	4 grammes.
Salicylate of bismuth	2 grammes.

Divide in 3 doses, and give 1 dose three times daily.

This is the prescription which many physicians are now trying for their nervo-gastric patients. Some of them add $\frac{1}{10}$ grain of sulphate of strychnine to the above.—*Paris Letter in Pharm. Record.*

HYDRASTININE IN MENSTRUAL HÆMORRHAGE.

Falk has found that hydrastinine is very effective in congestive dysmenorrhœa, menstrual hæmorrhages due to a change in the texture of the uterus, in metrorrhagia due to endometritis, in myoma, etc. He orders the following:

℞

Hydrastinini muriat	¼ gr.
Ext. glycirrhizæ, q. s.	
Ft. tal. pil. No. X.	

Sig. Take one or two pills daily.

One pill should be taken a few days before the hæmorrhage begins, and two while it continues.—*St. Louis Med. and Surg. Journal.*

TRINITRINE FOR ANGINA PECTORIS.

Trinitrine or nitroglycerin has been very largely used, particularly in France, in the treatment of angina pectoris, and is without doubt a valuable remedy for this disease. According to the studies of Huchard, Potaie and Herard, who have studied its physiological action particularly in relation to its use in angina pectoris, the drug is a vaso-dilator resembling very closely nitrite of amyl. Bocquillon uses it in the following manner:

℞

Alcoholic solution of trinitrine (1 per cent.)	30 drops.
Distilled water	10 ounces. M.

Two teaspoonfuls morning, noon and night.

For subcutaneous injection he uses the following solution:

℞

Alcoholic solution of trinitrine (1 per cent.)	30 drops.
Cherry-laurel water	3 ounces. M.

Twenty minims of this may be given hypodermically.

—*Med. News.*

TO REMOVE DARK COLOR FROM COMEDONES.

The *British Journal of Dermatology*, February, 1891, gives the following prescription of Unna and Leistokow for removing the unsightly "black-heads" which are so often an annoyance to a patient and a trouble to the physician:

℞

Lanolin	10 parts.
Vaselin	20 parts.
Peroxide of hydrogen	30-40 parts.

LACTIC ACID IN INFANCY DIARRHŒAS.

Dr. Thomas claims excellent results from the following mixture in gastric or gastro-intestinal dyspepsia, characterized by nausea, vomiting, flatulence and diarrhœa with non-slimy fœtid, yellowish or greenish stools:

℞

Lactic acid	℥j.
Simple syrup	℥v.
Water	℥iijss.

M. Sig. ℥j every quarter to half hour after meals.

—*Rev. med. de la Suisse Romande.*

THE

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When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLES.

HYPEREMESIS GRAVIDARUM.

Concerning no subject in obstetrics has there been greater confusion of ideas than the uncontrollable vomiting of pregnancy. Each writer has had a different theory concerning its essential nature, and the list of remedies and cures which have been vaunted is a long one. Prominent among the theories which have been advanced concerning its pathology are the following:

1. The theory of Bennet that the vomiting is often due to inflammation of the cervix. 2. That of Hewitt, that it is due to mechanical causes, as flexion or version or incarceration of the uterus, or to undue hardness or rigidity of the tissues about the *os internum*. 3. That of Veit and others that it is due to inflammation of the uterus, especially to endometritis. 4. That of Kaltenbach, that it is hysterical in nature. 5. And finally, the old theory that it is a reflex act, proceeding from the development of the pregnant uterus which is free from disease. Each of these theories is based upon studies of cases, and can be amply illustrated; hence, each must be accepted as containing a basis of fact.

It seems to us that the present status of this subject is far more satisfactory than it has been in the past. If well settled principles have not been formulated, at least well settled facts concerning the condition are in our possession which must be of the greatest value to the well informed physician in his management of cases of this affection. But is it not also true that sufficient facts are before us to justify certain conclusions? It is well known that pregnancy influences the entire system of the gravida, and that the nervous system is profoundly influenced by the condition. The nervous system becomes more irritable—grievous effects are produced by lesser stimuli, no matter what their peripheral origin. It is equally well established by clinical evidence that pregnancy causes vomiting—even though the *modus operandi* be obscure. If this increased irritability of the nervous system be accepted as the basal fact in hyperemesis gravidarum, the entire

subject becomes wonderfully simplified. Certainly a good working basis is attained. When the individual comes before the practitioner, his duty is not done when he makes the diagnosis. This simply gives him the cue for the general management of the case, the avoidance of all sources of irritation of a general nature, the regulation of the secretions of the body, the use of suitable diet, and the administration of drugs to lessen the irritability or to increase the tone of the nervous system. But his task is just begun. He must determine the particular causation factor or factors in the individual case, whether it be an inflammation of the cervix, the uterus or its appendages; or a displacement or hyperæsthesia of these organs; or some condition of the general system which is depressing vitality; or, finally, if it be hysteria. Each case becomes a special study, and a full diagnosis is to be made only after careful investigation.

Were all the facts now before the profession concerning the pernicious vomiting of pregnancy generally known and appreciated, death from this cause would occur less often. The practitioner who treats it in a perfunctory way until the victim is in extremis, or tries the more rational methods of treatment after it is too late, or calls in counsel to discuss the advisability of inducing abortion when she is beyond assistance, fails in his duty.

A WORTHY PROJECT.

Among medical men in this country may frequently be found those who, by stress of conditions beyond control—the toil of a tiresome calling, and the aches and pains that come to them, oftimes in larger measure than to those they serve—have gone down before the imperious power of Opium, Chloral or Cocaine.

Most of them, perhaps, are well enough off in this world's wares to compensate one who may extend a helping hand to draw them out of the narcotic slough, but some—many, we have reason to think, are not so happily situated, and plod wearily on, longingly waiting for the time when it will be their good fortune by dint of improved conditions to secure the succor desired. This is no fancy picture—we know of just such cases.

These and their friends will be glad to know that there is now the chance of getting such wished-for relief "without money, without price"—an opportunity nowhere else offered—and under conditions that promise most largely the result desired. We refer to the Brooklyn Home for Habitues, recently opened in that city under the care of a gentleman who has long given exclusive attention to narcotic disease, and is regarded among the highest authorities in his specialty in America.

This Home, a spacious building with especially attractive surroundings, is now open, and one-fourth of it free to worthy applicants too poor to pay. It is full and the requests for its care from indigent habitues will tax its resources for months to come. Of these requests thus far, the Medical Director informs us that thirty per cent. have been from physicians. This fact proves our opening assertion, and fully emphasizes the need of such a resort. To care for these an endowment of $60,000 is now being secured, the income from which will be devoted wholly to this purpose. They receive the same care and attention as the other cases and the fact that they are free patients is known only to the Medical Director.

The Board of Directors comprises well known physicians, clergymen and others in Brooklyn and New York and its five consultants are all eminent in their special fields.

Subscriptions to the endowment fund, none of which will be called for until the entire amount is subscribed, are solicited. We commend this good project to every doctor in the land, for his generosity will go to aid a poor but worthy brother in distress. Donations may be sent to the editor of this journal and will be duly acknowledged or to the Medical Director of the Brooklyn Home, Dr. J. B. Mattison.

CORRESPONDENCE.

A CASE OF MONSTROSITY.

ED. MEDICAL & SURGICAL REPORTER :—

I delivered on the 13th inst. a case of monstrosity of the anencephalia kind which is worthy of being put on record.

A multipara aged, 19 years, second child. There was none of the upper cranial bones present nor any development of the brain. The two parietal, frontal and occipital bones were absent and with no sign of development of their centers. There was also a complication of spina bifida of the upper part of the cervical vertebra to the extent of one inch. It lived about fifteen minutes and was able to move around. It did not or could not cry. The lower part of face and body was perfectly developed and weighed about 7½ lbs.

The woman had a fall during her first month of pregnancy which may have been the cause.

Her labors were always complicated with too much liquor amnii, the last time about two gallons. Yours truly,

DR. H. C. W. SHOWALTER.
New Holland, Pa.

PERISCOPE.

THERAPEUTICS.

EUPHORIN.

Dr. Sansoni, in the *Journal de Méd. de Paris*, May 17, 1891, is said to have employed euphorin as an antithermic, antiseptic, antithæumatic and sometimes also as an analgesic.

As an antithermic Sansoni gives the drug in powder form, either in capsules or dissolved in a glass of wine. The dose varied from 0·50 gramme to 1·50 grammes daily. He has used the drug in many febrile diseases, both acute and chronic, including typhoid fever, pneumonia, phthisis, acute rheumatism, etc. A lowering of temperature takes place rapidly and lasts for about five or seven hours. The lowest point is reached in three hours. It is frequently preceded by a chill. After exhibition of the drug the skin becomes slightly red in color and then breaks out in a profuse perspiration.

It is a fact worthy of comment, that weak subjects endure the drug better than vigorous ones; in the latter the temperature not frequently falling below normal. But in these cases the patient experiences a feeling of well-being or light-heartedness, from which symptom the drug has received its name. In patients under 15 years of age, it is not well to give more than 0·5 gramme within twenty-four hours. Indeed, as a rule, Sansoni advises that initially the drug should not be given in doses larger than 0·1 gramme. The reduction of temperature is occasioned by dilation of the peripheral blood-vessels.

In order to obtain an antirheumatic action, euphorin must be given in larger doses than when using the drug as an antipyretic. At least 1 to 2 grammes must be given within twenty-four hours, and the action is better when large single doses are given than repeated small doses. In chronic rheumatism larger doses are required than in acute rheumatism. In the latter the drug's action is both rapid and effective, the pain and swelling quickly disappear and the temperature drops. In some cases of chronic rheumatism, of a stubborn character, in which all other remedies (including antipyrin and the salicylates) had been used without avail, the action of euphorin was excellent.

As an analgesic the drug is of a special value in orchitis; less in sciatica, trigeminal neuralgia, the lacinating pains of tubes; and with scarcely any action in intercostal neuralgia and migraine. The dose should be from 1 to 2 grammes daily.

Euphorin in powder form is an excellent antiseptic, and will be found of great value in the treatment of indolent ulcers, and chronic ophthalmia. In a few days the diseased surface will assume a healthy appearance, suppuration will cease, and healing will be rapid. The application of euphorine powder will occasion a little pain.

A CASE OF POISONING FROM THE EXTERNAL USE OF TOBACCO.

Dr. Auché reports the following curious and interesting case to the *Wiener Medizinische Presse*, July 12, 1891. The patient was a man suffering from pediculi pubis. He took 200 grammes of tobacco and boiled it down in two litres of water, and then proceeded to "rub in" the mixture over his entire body. After this performance he did not wipe himself off, but sat in the wind and dried. This was done in the morning, and at about half-past one in the afternoon he repeated the experiment. At three o'clock he was suddenly seized with violent nausea and dizziness; his face grew dark, cold perspiration streamed from his body, which

assumed an extreme pallor; and his hands and feet trembled. The patient felt as though intoxicated, and seemed to be looking through a fog, being unable to distinguish the contour of any object. His pupils were enlarged, but re-acted to the light. He could hear well, but said he felt as though cotton were stuffed in his ears. Vomiting occurred from time to time. Besides this, the heart's action was much slower than normal, and the radial pulse, small, thready, and scarcely perceptible.

These conditions lasted for about three hours, after which they gradually abated. The next day the patient only complained of a severe headache, which a long sleep, however, relieved.

This case proves that tobacco used externally can give rise to the same toxic symptoms as when taken internally.

The reporter of the case fails to state whether the pediculi were affected or not.

FLUID EXTRACT OF HYDRASTIS CANADENSIS FOR THE NIGHT-SWEATS OF PHTHISIS.

Dr. Cruse, of Curlands, reports to the *Medicinische Neuigkeiten*, July 11, 1891 that while giving the fluid extract of hydrastis canadensis for pulmonary and renal hæmorrhages, the existing night-sweats in the patients treated simultaneously disappeared. This was very markedly the case in the last stages of phthisis. In one case of phthisis accompanied by night-sweats, which although primarily controllable by atropin, agaracin, etc., but which finally remained unimproved by any treatment, the fluid extract of hydrastis was given with very beneficial results. Dr. Cruse gave thirty drops of the fluid extract every evening. Later, however, he discontinued the drug but the night-sweats had not reappeared up to the time of his making the report (over three weeks). Experimenting further, Dr. Cruse found the remedy to be both prompt and efficacious in all cases of this kind. The initial dose was always thirty drops, every evening, which was increased if indicated.

ARISTOL IN DISEASES OF THE EAR AND NOSE.

Professor K. Burkner, of the Göttingen University Clinic for Diseases of the Ear, states in the *Berlin Klin. Woch.* that aristol was so warmly recommended to him as an antiseptic and a cicatrisant, that he felt impelled to institute extended trials of it in Polyclinic and in practice, for patients suffering from diseases of the ear and nose. Rohrer was the first to announce the results obtained by the use of aristol in ear diseases. He used it in acute and subacute, middle ear inflammations, by insufflation, after drying the cavity. There resulted a rapid decrease of secretion and tumefaction, and an early healing of the perforation. Aristol was quite as serviceable in otitis externa and ozœna. Rohrer reports twenty cases in which the effect of aristol was better than that of the usual remedies, especially boric acid, iodoform and iodol. Pirii, in 182 cases of rhinitis ulcerosa, ozœna obtained very good results from the use of aristol in powder, and aristol ointment. Massini obtained excellent results in fœtid rhinitis by the use of aristolized tampons.

Prof. Burkner has employed aristol as a powder and as an ointment, and has also used it intimately mixed with glycerine. In eight of his cases the suppuration was promptly removed. In fourteen cases the result was gained, but not so rapidly. In ten cases there was some increase of secretion.

Aristol proved to be exceedingly valuable —as also stated by Szenes—in determining the formation of granulations in the tympanic cavity, or auditory canal. Of twenty-two cases (of which a portion had been treated by lunar caustic with little benefit) thirteen showed under aristol, a very rapid improvement. Within a few days the proliforations had completely, or very considerably, dried up. In six cases there was a somewhat less marked improvement. In three cases of otitis diffusa externa, with suppuration, the condition yielded quickly to treatment by aristol.

Prof. Burkner also obtained very satisfactory results from the use of aristol in nasal diseases. He tested it in twenty-six cases, of which three were nasal syphilis, fifteen non-syphilitic ozœna, and eight were cases of granulative formations.

The effect of aristol in a large majority of the above cases was really surprising. Headache occurred very rarely, and lachrymation was insignificant as compared with what generally follows other remedies used in the form of powder.

After the first treatment by aristol the fetor often disappears at once for twenty-four hours. On longer treatment the fetor vanishes for days at a time, and a cure is finally obtained. The appearance of the mucus membrane quickly improves on the

atrophic surfaces, as well as in their neighborhood, when the surrounding tissue is hypertrophied.

Ulcerous conditions of the syphilitic origin, showed a remarkable tendency to heal after a very short use of aristol. This remedy is, in these cases, second to none of those usually employed.

As in ear cases, so also in nasal cases, the proliferations of granulation tissue were very rapidly improved. In many of his cases the granulations were permanently removed by insufflation of aristol, or by tampons impregnated with that preparation. He noted that aristol excited a less considerable hypersecretion than other remedies, such for instance as iodoform.

For affection of the nose, aristol constitutes a noteworthy enrichment of our treasury of therapeutic agents; and he also recommends its use in aural therapy, in which it should receive a very entended trial.

ACTION OF ALOIN.

Professor Meyer has chemically and physiologically examined aloin obtained from Barbadoes, Curaçoa, and Natal aloes (*Archiv. f. expt. Path.*, xxviii, Heft 3 and 4, 1891). Barbadoes and Curaçoa aloes yield an identical aloin, the former contains about 10 per cent., the latter about 16 per cent. It has the formula C_{16} H_{16} O_7, is in yellowish white acicular crystals, soluble in hot water and alcohol, much less so in acetic ether, and only in traces in chloroform, ether and benzol. Natal aloes yield about 14 per cent. of a different aloin, having the formula C_{24} H_{26} O_{10}, scarcely soluble even in hot water, soluble in 70 parts of boiling alcohol, very soluble in caustic soda, from which it is precipitated unchanged by acids. In experiments on animals and man the aloin was given *per os* and subcutaneously. For subcutaneous administration a solution in formamide was used—water may also be used for Barbadoes aloin, but the solution is more liable to decompose; the solution has a neutral reaction, and after injection causes burning pain for a few minutes but otherwise has no evil effects. The aloin can be detected in the fæces and urine by tests which are given at length and which are extremely delicate. The experiments showed that aloin from Barbadoes and Curaçoa aloes acted with certainty as a purgative, whether given by the mouth or subcutaneously. The dose in both cases is about the same, which is explained by the fact that aloin, when given hypodermically, is excreted from the blood chiefly into the bowel, only a mere trace or none being found in the urine. In man, dogs, and cats there is no albuminuria after subcutaneous injection, but in rabbits—in which animals aloes does not cause purgation—subcutaneous administration is always followed by inflammation of the kidneys, albuminuria and death. Its purgative action is as slow when it is given hypodermically as it is *per os*. The resin left after extraction of the alion from aloes is also purgative. Natal aloin was active in dogs and cats only after very large doses; but if an alkali were added to it—so as presumably to decompose it—its activity was greatly increased. By subcutaneous injection it was always active. In man, on an ordinary mixed diet, given alone or with an alkali, it had very little purgative effect, but in man fed on an exclusively animal diet, it was much more active. The reason probably is that in the latter case the putrefactive processes in the intestine are much more marked, and the aloin is decomposed into a more active substance. All the experiments seem to point to the conclusion that aloin itself is not an active purgative, but that it becomes gradually decomposed in the intestine into a more active body, and hence the slowness of its action.

—*Brit. Med. Jour.*

THE TREATMENT OF HÆMOPTYSIS.

In a paper published in the *Zeitschrift fur Therapie* for April I, 1891, Prof. Nothnagel calls attention to the fact that the most essential feature in the treatment of hæmorrhage from the lungs is that the patient should be kept absolutely quiet, should not be allowed to speak, the room should be kept at a moderate temperature, and he should eat nothing warm, and his food should be of the most readily digestible character, cold milk being preferable to anything else; and, in fact, Prof. Nothnagel advises that for two days the diet shall be confined solely to cold milk. It used to be taught that coughing was of assistance in removing the blood from the bronchi, but this is now recognized as being an extremely hurtful teaching, and the first attention should be directed towards suppressing coughing, and for this purpose morphine is the chief remedy. When the hæmorrhage is only moderately severe, nothing further need be given to the patient than morphine; but when, as occurs in many cases, the hæmorrhage does not spontaneously cease, then other remedies have to be given.

At first Prof. Nothnagel calls attention to

the remedies which ought not to be given, remedies which have been frequently recommended, and which yet may produce most disastrous effects. First of all in this connection he calls attention to the sesquichloride of iron. This as is readily comprehensible, is only of use as hæmostatic in external hæmorrhages, and then likewise only when those hæmorrhages come from capillary vessels. Even in the hæmorrhage which may follow the extraction of a tooth, it must be used with the greatest care. As is well known, this remedy causes coagulation of the blood, and so leads to the formation of a thrombus, while its constricting action on the blood-vessels is so slight as not to be worth attention. When given internally, even if it is absorbed, which is extremely doubtful, it must form other combinations, and then will only produce the action of any other iron preparation which evidently would lead to an increase of the bleeding; and it is an old rule, but a good one, that individuals with a hæmorrhagic tendency must be very cautious in the use of iron preparations. As a consequence, then, the internal use of the solution of sesquichloride of iron is neither theoretically nor practically of the slightest use. The same remarks apply to tannic acid and alum. These remedies only serve to constrict the blood-vessels when applied in dilute solutions. So also inhalations of all kinds should be strictly prohibited on account of the more vigorous respiration which this mode of treatment entails, and the consequent danger of increasing the hæmorrhage instead of diminishing it. When, however, a violent hæmoptysis is to be treated, two substances are named, which may be of great service. The first of these is ergotin, which acts on the unstriped muscular fibre of the blood-vessels, and which may be given both internally and subcutaneously; the second remedy is the acetate of lead, which may be given in doses of from $\frac{1}{2}$ to $\frac{3}{4}$ grain. There is still another remedy which might be employed with some prospect of success, although Nothnagel states that he has as yet had no experience with it, and that is *Hydrastis Canadensis*. Atropine also, in subcutaneous injections of $\frac{1}{64}$ grain, has likewise been claimed to do good. As to the use of common salt, given in teaspoonful doses, it is not clear as to whether the arrest of hæmorrhage, so frequently reported to follow its employment, are coincidences or consequences of the treatment. At any rate, it can do no harm, and may do good, when nothing else is obtainable. As regards the application of cold externally, Nothnagel is very doubtful as to its value; for, in the first place, is is very uncertain as to whether the cold either directly or reflexly will succeed in producing vascular contraction at the affected part; and in the second place, the application of cold to the surface of the thorax produces direct coughing, and coughing is certainly much more dangerous than the possible constricting value of a cold application.

Finally, Nothnagel alludes to the heroic measure of bleeding from a vein to arrest hæmorrhage from the lungs, a proposition based upon the observation that a violent hæmorrhage in leading to syncope often causes the arrest of bleeding. Of course such a procedure as bleeding for a hæmorrhage from the lungs can be dismissed without discussion.—*Ther. Gaz.*

APHORISMS IN MEDICAL EMERGENCIES.

Accidents in Giving Anæsthetics.—Tincture of digitalis hypodermically; draw out the tongue, and see that respiration is not mechanically impeded; invert the patient quickly and temporarily; use forced respiration promptly; apply external warmth and stimulation to the surface; avoid the exhibition of alcohol.

Angina Pectoris.—Inhalation of chloroform, or of a few drops of nitrite of amyl; $\frac{1}{100}$ grain of nitro-glycerine, internally; placing the feet in hot water; mustard to the pecordial region; dry cup between the shoulders; hypodermic injections of morphine and atropine; administration of stimulant and anodynes.

Apoplexy.—Elevate head and shoulders; if pulse is moderately strong and the brain congested, bleed from the arm freely, sixteen ounces or more; elaterine (gr. $\frac{1}{6}$) or croton oil, two drops in a drachm of sweet oil or glycerine; cold to the head by means of an ice-bag.

Asphyxia.—In drowning, hold the patient's head downward for a few seconds. In hanging or choking, bleed from the jugular. If there is obstruction to passage of air through mouth or nose, open trachea. Artificial respiration at once, and to be continued. Friction, warmth, warm bath (100°), ammonia to nostrils, galvanizing of phenic nerve.

Asthma, Spasmodic.—Hypodermic injection of atrópine into the nape of neck; inhalation of smoke of stramonium leaves; fluid extract of nux vomica, internally, alcohol, ether, chloral, opium; inhalation of chloroform cautiously administered.

Colic, Gall.—Morphine hypodermically;

inhalations of chloroform; hot application to the abdomen.

Coma.—Dark room, head high and cool; head shaved; low diet; croton oil; if due to compression, antiseptic trephining; if due to uræmia, pilocarpine and hot baths.

Heat-stroke.—Remove clothing, sprinkle with water, cold cloths to head, hot cloths to feet; antipyrin; bleeding in robust subjects. After temperature is reduced give alcohol and diffusible stimulants, hypodermically if necessary.

Pulmonary Hæmorrhage.—If severe, raise the thorax, administer opiate; gallic acid fifteen grains every fifteen minutes; ergotin five to ten grains hypodermically two to three times daily; ice-bags to the chest; as a last resort a ligature may be thrown around the larger limbs. (Tyson.)

Hæmorrhage from Stomach or Bowels.—Tannic acid ten to fifteen grains if due to capillary oozing. If from typhoid fever or ulcer of the stomach, treat as for pulmonary hæmorrhage.

Hiccough.—Acid drinks, cold douches, ether or chloroform internally, externally, or by inhalation; musk, opium, antispasmodics.

Hysteria.—Inhalations of ether or chloroform for the spasms. If this is contra-indicated, give mono-bromide of camphor, musk, valerian, assafœtida, the bromides. In convulsive seizures, morphine and atropine hypodermically.

Shock.—Warmth; hot water bottle to feet, flanks and epigastrium; warm effusion to head; horizontal position; frictions, stimulants, brandy, ammonia, galvanism to precordia.

Strangury.—Vesical, hypodermic injection of morphine, to be followed by other remedies; rectal enemata of starch water and laudanum followed by a hot sitz bath.—*E. J. Kempf., M. D., in Am. Pract. and Nems.*

THE PHARMACOLOGY OF ASPARAGUS.

The influence of the active principles of asparagus on the renal function does not appear to have been very clearly made out, and although for some reason or another a general impression prevails in favor of its ingestion being followed by a diuretic effect; this view is not based on reliable data. Indeed, there are grounds for believing that it not uncommonly exercises a disturbing influence on the renal functions, causing in some instances a notable decrease in the amount of urine excreted. It is very improbable that any injurious effect is produced on the healthy organism, or this succulent vegetable would not have become a general favorite. As, however, it may possibly give rise to undesirable symptoms in particular cases, it is as well that the profession should be made acquainted with the real nature of its physiological action, and we shall look to our scientific pharmacologists for some information on this point.—*Med. Press.*

MEDICINE.

CHOREA—ITS PATHOLOGY AND TREATMENT.

Chorea is a neurosis probably produced by irritation in the motor centers of the cerebrum, through which the influence of the will over motion is disturbed. In isolated cases it may be caused by capillary emboli or other changes in the lenticular nucleus.

Psychical influences or anæmia, perhaps by the vasomotor disturbance of the motor centers which they occasion, are the most frequent causes of chorea.

Chorea frequently follows rheumatism. Most probably the same irritant which produces rheumatism may, by its effects on the motor centers, bring about chorea.

The frequent coincidence of heart affections and chorea is largely due to the etiological connection of both of these diseases with rheumatism. Still, it is possible that heart affections may give rise to vasomotor disturbances in the motor areas, and that recent endocarditis may produce capillary emboli in the same locality, both of which phenomena might readily cause chorea.

The therapeutics recommended by different authorities vary according to the view which they take of the etiology. Thus some recommend chiefly nervines and tonics; others recommend anti-rheumatics; while still others lay the greatest stress on the treatment of such heart affections as may be present.

I shall speak only of those medicines which are shown to be efficacious by the unanimous testimony of a large number of clinical reports. This claim can in reality be substantiated only for arsenic and antipyrin. There can be no doubt that these two drugs do certainly shorten and ameliorate the course of chorea. They must, however, be given in sufficiently large doses.

As less important, though still useful in the treatment of chorea, I wish to recommend iron for those cases in which anæmia exists, and chloral hydrate for those in

which there are great restlessness and insomnia.

So much for the medical treatment of chorea. I will now consider the physical treatment. Some authorities recommend absolute mental and physical quietude for choreic patients. Others recommend gymnastics as a cure, claiming that it improves the general nutrition as well as the nutrition of the muscles, and that furthermore it tends to bring the muscles back under the control of the will. My own experience teaches me that all mental exertion is to be avoided, likewise all bodily exertion, except such as is conducted strictly under the direction of the physician. Certain movements must be made before the patient, and he must imitate them, at the same time watching carefully the execution of his movements. From simple we must gradually go to more complex exercises, always carefully avoiding fatigue. Thus methodical gymnastics will be found to aid greatly other treatment.

Massage and electricity do not seem capable of accomplishing much in the management of chorea.

As to balneo- and hydro-therapy in chorea, I would say that I do not think it well in the acute stage to deprive patients of their home and comforts and send them to resorts.

After the acute stage has passed cold water treatment in the shape of baths or otherwise may be a useful adjuvant in suitable cases. The patient's peculiarities must be regarded, his manner of reacting and his antipathy for cold temperatures should be taken into account. Never should he be excited. Shower baths are very seldom applicable. Warm or lukewarm baths are sometimes preferable to cold ones. Especially in cases complicated with rheumatism and heart disease should cold water be abhorred. When the heart trouble is acute, no baths at all should be employed.—Dr. Groedel, in *Deut. Med. Zeit.*—*Weekly Med. Rev.*

A RARE CASE OF HEPATIC ABSCESS.

Dr. Joseph Gabriel says: On Aug. 29th, 1890, I was called to see Sheik Khalee, aged thirty-two, a native of Hayoum, in Upper Egypt. He was suffering from pain in the right side; his face was pale; tongue coated white; pulse 100; temperature 102°, with irregular fits of chill; respiration short and rapid. According to the patient's statement his illness was of one month's duration, during which he was getting worse every day. On inquiry regarding his habits and his previous illness, he said that he had been in the habit of drinking intoxicating liquors, which he stopped five years ago; a year before this date he suffered from intermittent fever, and he did not have dysentery. Physical examination showed that on percussion the pain was increased, and the area of liver dulness was larger than usual, but I could not detect any fluctuation; urine of natural color. I had no doubt that my patient was suffering from inflammation of the liver, and probably commencing abscess. I gave him a solution of diluted nitro-muriatic acid, sulphate of quinine, and tincture of rhubard, and applied a blister on his right side. On Sept. 3rd I again visited the patient, and found him very little better. He complained of pain in the right shoulder; his bowels were irregular. I told him to continue the medicine, and perscribed in addition akaline mineral waters. On the 10th his temperature was almost normal; pain considerably less, but he looked very weak still, and had no appetite. I told him to continue taking the mineral waters, and applied a second blister on his side. On the 20th I visited him again, and found him walking in the garden. Upon examination I found everything normal; he was apparently cured, and enjoyed good health during two months, at the end of which he was suddenly attacked by dyspnœa and a severe cough, and expectorated a material like chocolate in color. I examined the expectoration, and found it composed of pus cells and broken-down liver tissue. I ordered him a stimulant, tonic medicine, nourishing food, and left the case to nature. He still expectorates, and up to the present time he expectorated about 400 ounces, but has strength sufficient to go about and fulfil his ordinary duties.—*Lancet.*

SURGERY.

PHAGOCYTES.

It is a matter of common observation in surgery that solid materials in contact with living tissue undergo erosion and diminution of bulk, and, under favorable circumstances, altogether disappear. The most familiar example of this occurrence is necrosed bone in contact with granulations. The worm-eaten appearance of the sequestrum, its separation from the living bone, its diminution of bulk, and in some cases its total disappearance without exfoliation, indicate that it has

been eaten away. This process can best be watched in cases of denuded skull in which the growth of granulations through the outer plate and the coalescence of these and the gradual absorption of the intervening white bone can be clearly seen. Ivory pegs, catgut stitches and drains, decalcified tubes are capable of being partially or wholly consumed in the same way. It is not a case of disintegration by maceration and subsequent absorption of the molecules. The worm-eaten aspect of the fragments negative this idea, as well as the fact that when the material is bathed in pus and is not in contact with granulations it does not undergo diminution of bulk. The absorption of particles of pigment from the skin and the conveyance of these particles to the interior of lymphatic glands by the cells, in which the coloring matter can be seen, is another instance in point. The efficient agents in this process of erosion are undoubtedly leucocytes, which carry the foreign material inwards for excretion, or outwards, in the process of suppuration, for emission. This remarkable and salutary property of wandering and amœboid cells in the animal organism has acquired a new and singularly striking interest through the researches of Dr. Elias Metschnikoff, who has demonstrated that the amœboid cells of the body, fixed and free, possess the property of enclosing microbes in their protoplasm, and digesting or disintegrating them. This is a novel illustration of the exercise of the *vis medicatrix naturæ*, and has led its discoverer to enunciate a new theory regarding natural and acquired immunity against diseases arising from the introduction into the body of pathogenic organisms. The process of prehension of micro-organisms by the pseudopodia of phagocytes is, according to this theory, denominated phagocytosis. In some cases the cells manifest a quick attraction for the microbes and rapidly envelope them; in other cases they display a repulsion. These attitudes are termed *positive chemiotaxis* and *negative chemiotaxis*. The exercise of either of these depends on the peculiarities of the animal and the chemical qualities of the material. Malignancy implies negative chemiotaxis and *vicé versa*, and negative can be converted into positive chemiotaxis by preparation of the organism by means of protective inoculation. Immunity may be natural when the animal is, as it is called, refractory, or acquired when an animal naturally susceptible is rendered refractory by vaccination. In both cases immunity is coincident with, if not caused by, the existence of strong positive chemiotaxis. This theory presents us with a struggle between two contending elements—the phagocytes on the one hand and the microphytes on the other. Victory on one side means immunity or recovery from disease; victory on the other means illness or death. The theory is an exceedingly plausible and fascinating one, and is applicable to the ordinary phenomena of inflammation as well as to the phenomena of microbic infection. A very lucid statement of it will be found in the *British Medical Journal* of the 31st of January in a translation of a lecture delivered by Dr. Metschnikoff himself at the Pasteur Institute. In this lecture the facts on which the theory rests are clearly set forth, the bearing of these on the question of immunity very intelligently discussed, and sundry theories which would explain immunity in other ways criticised with much ability and force. We strongly commend this lecture to the attention of those who may desire fuller information on this most interesting and important topic.—*Indiana Med. Gaz.*

HOW TO KEEP NEEDLES FROM RUSTING.

Dr. Robert H. M. Dawbarn, writes in the *N. Y. Med. Jour.:* It would be an interesting point to determine how many of your readers are agreed regarding the best way of keeping their various surgical goods and chattels ready for instant use. In talking with other surgeons I find many opinions about it.

As to needles, for instance. I think the majority, after sterilizing them by heat, try to keep them dry. Dry sterilizing at the usual temperature is apt to injure their temper and cause subsequent bending during use; boiling or steam, to induce specks of rust. Rust, too, results from occasional subsequent exposure to air; and if cotton or cloth is used, this attracts moisture. Should a film of vaseline or oil be applied as a protective, this causes dust to cling, and requires fresh cleansing before use. Glycerin I have tried and found wanting. In it, hygroscopic as it is, the needles do not remain entirely untarnished. They finally turn black.

For the past year I have been pleased with the results of a new plan—new to me, that is, though very probably not to others. This is simply to keep my needles in alcohol. For extreme safety against rust, I use absolute alcohol; but the commercial article would probably be efficient. At least, some needles which I have kept in common

alcohol for a month as an experiment are as bright as ever.

Upon buying the needles, I immerse them in benzine to remove grease. Then, after running them through a towel, I plunge the point (a cutting-edge Hagedorn) into a bit of cork of the size of a pea—to avoid dulling from jolting—and finally, with their corks, they are put and kept in a wide-mouthed, glass-stoppered bottle filled with absolute alcohol.

After use, I sew through a thick, wet, soapy towel repeatedly, cleanse the eye with a thread, immerse in benzine, and finally replace in the alcohol. This is certainly an efficient disinfectant, besides being an excellent protector against rust.

By the by, I long ago gave up using (save in bowel work) any other than Hagedorn *self-threading* needles, which are a decided comfort, and, when properly made, do not cut the thread.

GYNÆCOLOGY.

ACCIDENTS RESULTING FROM INTRA-UTERINE CAUTERIZATION WITH CANQUOIN'S PASTE.

Pichevin (*Nouvelles Archives d' Obstét. et de Gynécol.*, No. 2, 1891) concludes that the time has come to refute the arguments which have been advanced to legitimize the employment of a therapeutic measure which theory condemns in advance. He feels that it is necessary to furnish some facts, the eloquence of which is such that men of good faith and physicians desirous of the interest of their patients may renounce positively a preceeding which, as someone has written, is "a manifestation of atavism." Many who have employed caustics in the uterine cavity at some time in their practice are strongly opposed to this method of treatment to-day. Avan spoke of cauterizations of the cervix with the paste of the chloride of zinc, but was far from recommending this treatment. Bennet makes mention of the retractions which he had observed in women whose cervical canal had been cauterized. Scanzoni was strongly opposed to the employment of the caustic of Filhos, and Nonat reports great constriction of the utero-vaginal orifice following the use of Vienna paste. Bernutz and Goupil, after treating a young woman suffering from metritis by Vienna paste, reported an occlusion of the neck with menstrual retention. Emmet, Schröder, Martin, Mundè and others, all record themselves as opposed to cervical and intra-uterine cauterizations.

The advocates of the treatment by cauterization are strong in their opposition to the method of treatment by curetting the uterus. They claim that the latter is an operation which necessitates prolonged and rigid antiseptic precautions; that it places the surgeon under the necessity of making a previous dilatation; that it demands a chloroformization, which is "always formidable;" that it gives rise to a loss of blood which is at times very great; that it is a rather grave and complex operation; that it compels the surgeon to practice forcible depression of the uterus; that it is not successful when the uterus is retro-displaced; that it does not give better results than the other procedures which have been advanced for the cure of endometritis; and, finally, that it causes atresia. In answer to these propositions, Pichevin, declares that *curage* of the uterus has been adopted by the immense majority of surgeons. Antisepsis, he says, is beyond doubt indispensable before, during and after the operation; slight dilatation is useful, but not indispensable. As for chloroformization, it may be omitted; but for the sake of the patient it has become the custom to resort to anæsthetization. The quantity of blood which escapes during and after the operation is absolutely insignificant. Moreover, hæmorrhage—when it exists before the intervention—is arrested as by enchantment in the very great majority of cases. The abrasion of the uterine mucosa with a dull or cutting curette is not a complex operation. There is nothing more simple. Forcible depression of the uterus is not necessary. It suffices to fix the cervix with the aid of a small forceps. When the uterus is retro-displaced, the metritis will be cured under the influence of the curette, but it is necessary to replace the organ in its normal position. The abrasion of the uterine mucosa is not an infallible method of treatment for endometritis, but no procedure can be compared to it. As to subsequent atresia, Pichevin has never observed it in his practice.

On the other hand, the apostles of intra-uterine cauterization claim the following advantages for Canquoin's paste in the treatment of endometritis:

1. It is unnecessary to perform minute and prolonged antisepsis.

2. It is unnecessary to practice a previous dilatation.

3. It is unnecessary to anæsthetize the patient. The introduction of the stick of Canquoin does not occasion any pain. As

to consecutive pains, they are rare, ordinarily but slightly marked, and of short duration.

4. The treatment does not necessitate a long rest. The patient is cured at the end of some days.

5. There is no hæmorrhage produced by the cauterization.

6. Atresia does not result, or if it is noticed it is an exceptional occurrence. In any case, the cervical constriction is not special to this mode of treatment.

7. The intra-uterine cauterization is efficacious. The cure obtained from the stick or pencil is real and durable.

8. The innocuous nature of this intervention is undeniable.

9. The introduction of the stick or pencil of chloride of zinc into the uterus is simple and easy.

To these propositions Pichevin offers the following refutations: While Polaillon strongly advocates the employment of intra-uterine caustics, he admits that antiseptic injections are indispensable while the scar is forming and eliminating itself, and during all the time necessary for the cure. Dumontpallier likewise says that the day of the operation being determined, frequent vaginal injections, about three *per diem*, should be made before the operation, employing a solution of sublimate 1 to 2000 or 1 to 3000.

Grandmaison and Bock recommend antiseptic washes for the external genitalia, with vaginal and intra-uterine injections of sublimate while the eschar is being cast off. Bock injects into the uterus tincture of iodine, perchloride of iron, or silver nitrate. It will thus be seen that the advocates of this method themselves largely employ antisepsis. As to the previous dilatation, Polaillon recognizes the fact that in certain cases it is necessary to introduce a laminary tent, or to perform a slight dilatation with a uterine dilator. Grandmaison and Bock have also been compelled to dilate. Several of the followers of this method of treatment have testified to the severe pain which has been produced by the caustic agent. Reynier noticed that injections of morphine failed to relieve these sufferings. In ten operations Dr. Jacob has, with but one exception, noted very severe pains attendant upon cauterization. As far as rapidity of cure is concerned, the statements that the patients who have undergone cauterization are discharged in a few days cured are gravely erroneous. Bock, the Belgian defender of the system says: "The time necessary for a cure will be from three weeks to three months." Jacobs, Polaillon and Batuaud report cases of violent hæmorrhage following the separation of the eschar, thus confuting the claim of the adherents of cauterization as to the entire absence of bleeding. The efficacy of cauterization has not been demonstrated by the reports which have been published. In fifteen operations Deletrez reports but three cures, while Jacobs has ten relapses in ten cases. Neither is the method of treatment entirely free from unfortunate complications. In one hundred observations Dumontpallier reports four peri-uterine complications (two cases of pelvic peritonitis and two abscesses of the broad ligament). Following the application of caustics to the uterus, the state of the menstruation has been in several instances altered. Dysmenorrhœa and irregular menstruation, with increase of flow, has been noted by different operators.—*Med. News.*

CONSTIPATION AND ITS RELATION TO PELVIC DISEASES IN WOMEN.

Root (*Southern Medical Record*, May, 1891) calls attention to constipation as a frequent factor in pelvic diseases of women. The habit of constipation is largely due to carelessness, especially in childhood. In the adult female, constipation is very frequent, and many of its symptoms point to pelvic disease; pain in the back, pain in the top and back of the head, a feeling of weight in the limbs, dysmenorrhœa and leucorrhœa, subjecting the patient to local treatment, when changes in the modes of life, with relief of constipation, would restore health. It is also very evident that this disease acts as a most active factor in the production of pelvic disease in women; for where endocervicitis and even retroversion exist, rapid improvement is made as soon as constipation is relieved. Pelvic disease results from constipation through pressure and keeping up a constant condition of sluggishness of the pelvic circulation, amounting practically to a chronic congestion. Many cases of pelvic disease can be cured by the proper regulation of the bowels, and he cites cases in proof of this statement.—*Univ. Med. Mag.*

OBSTETRICS.

TREATMENT OF RUPTURE OF THE UTERUS.

In considering the question of laparotomy Leopold *Archiv f. Gyn.* asks us to remember that hæmorrhage which may be insignificant

externally, may be considerable and dangerous within. After laparotomy, hæmorrhage being controlled and the abdominal cavity cleansed suture the rupture, if possible, or plug uterus and vagina with iodoform wick, and draw another through the tear and lower angle of the abdominal wound. Subsequent treatment according to the usual rules. In rupture of the uterus the child should be delivered so as to cause the least risk to the mother; not by turning, as that would extend the tear, but by perforation or embryotomy. If engaged in the lower pelvis, deliver manually or by the forceps. Laparotomy should alway be performed at once and under strict antiseptic precautions in cases where the child has escaped into the abdominal cavity. The danger to the mother increases strictly as to the time since rupture and the force used in attempting delivery, these factors leading to exhaustion and infection. The death of the child follows very soon after rupture. Although the mother may show great shock, if assistance is prompt and the hæmorrhage successfully controlled, the prognosis is good in the worst cases. Uterine rupture at the vesico, uterine fold is more frequent than is generally supposed. The hæmorrhage is not necessarily severe, and may be closed by forced antiflexion of the uterus by pressure and bandage, together with plugging the ruptured uterus and vagina with iodoform gauze.

MERTRITIS DISSECANS.

Dr. Höchstenbach (*Archiv f. Gynäk.*, vol. xxxvi, part. ii) describes a case where the first labor was lingering. The membranes were ruptured too early; the os was long in dilating. The forceps was applied to the head of the still living child before complete dilatation of the os. Four attempts at delivery failed. Sixteen hours later, the child was extracted, dead, with the forceps. A rent in the perineum was sewn up at once. *Post-partum* hæmorrhage set in, and the placenta was detached with the hand. The uterine cavity was washed out with an antiseptic lotion. Within an hour symptoms of septic infection set in. Stinking gases and pus escaped from the uterus, sloughs of vaginal mucus membrane were discharged, and a vesico-vaginal fistula formed. Metastatic pneumonia set in, and on the twenty-sixth day after birth a large slough, consisting of uterine and vaginal tissue, was expelled with free fœtid purulent discharge. The pyæmic symptoms passed off for awhile, the vagina and uterus becoming practically closed. A plastic operation was performed half a year later for relief of the fistula. Three months later the patient died of pyæmia. A necropsy was performed, and the former existence of metritis dissecans was authenticated. The uterus and vagina showed the effects of extreme cicatrical contraction. Extensive plugging of veins, metastatic abscesses in the left kidney and lung, and left hip-joint disease were also discovered. Dr. Höchstenbach has collected twelve cases of metritis dissecans; three proved fatal, two through sequelæ of infection, one from rupture of the thinned uterus during injection. This case is a warning to obstetricians; it shows how caution should be exercised in the management of injections, especially when there is much fœtid discharge. Diagnosis is easy as soon as the sloughs begin to escape. All the twelve cases could be traced to puerperal infection. One patient had typhoid, one syphilis; these constitutional diseases may have encouraged local septic infection. It is not certain whether the disease begins as primary necrosis of the uterine tissue, through plugging of its vessels with coagulum or germs, and subsequent demarcation by an inflammatory process, or as destruction of the uterine tissue by primary inflammation and free exudation.—*Brit. Med. Jour.*

VOMITING OF PREGNANCY.

Dr. Graily Hewitt has recently published a work on this subject, in which he reiterates his frequently-expressed views as to the causation of this distressng symptom. He endorses the opinion of many authorities that the vomiting is a reflex act which starts from the neighborhood of the internal os, and he claims that the irritation arises from malposition of the uterus, causing compression at this part, and his treatment therefore consists chiefly in reposition of the displaced organ. —*Exchange.*

PÆDIATRICS.

STERILIZATION OF MILK.

Petri and Maassen (Arbeiten aus dem K. Gesundsheitamte, *Deutsche med. Zeitung*, No. 45) reports observations made upon 1,800 bottles of sterilized milk, 600 of these having been examined for bacteria. It is possible, as they found, to obtain by sterilization milk absolutely free from germ life. Several con-

ditions, however, bear upon this point. Firstly the composition of the milk at the time of sterilization, a permanent preparation being possible only when the milk is fresh and free from impurities; next, the time of sterilization; and lastly, the storing of the already sterilized milk in cool places. By sterilizing we destroy the pathogenic organisms of anthrax, cholera, typhoid, tuberculosis, diphtheria, erysipelas, suppuration, as well as the bacteria of blue milk, etc. The sterilized milk has a certain cooked taste, easily distinguished from fresh milk, but by no means unpalatable, so that, as a rule, it is readily taken.

Hesse (*Zeitsch. f. Hygiene*, same reference) has arrived at the following conclusions as a result of his work upon the question of sterilization:

1. Milk suitable for sterilization can only be obtained from healthy, dry-fed, and carefully tended cows.

2. All possible contamination of milk up to the time it is placed in the sterilizer is to be most carefully guarded against.

3. If possible, sterilization should be effected immediately after milking. If this cannot be done, the milk is to be at once cooled and maintained at a low temperature. Even then, not more than a few hours should elapse before sterilization.

4. To avoid the cracking of bottles in the sterilizer, the latter, filled to about four-fifths of their capacity, should be introduced into the sterilizer cold, and the temperature gradually brought up to the boiling point; or, what is preferable, first warmed with their contents and then subjected to the proper heat.

5. The milk is to be brought to the boiling point, the temperature being indicated by a thermometer penetrating into the interior of the apparatus. Once this degree is reached, the process is to be continued for an hour and three-quarters. Then the milk is truly sterilized. In bottles made of green or brown glass it will keep indefinitely. White glass bottles should be protected from the direct rays of light.

6. Every bottle should be tested, immediately before using, with reference to taste and odor.

It is believed safer for each family to sterilize its own supply for daily or weekly consumption, rather than to depend upon articles of commerce, which, being prepared in much larger quantities, are thereby also more liable to contamination or subsequent accidents.

Guérin has recently suggested, as a substitute for sterilization, freezing of the milk, in elastic reservoirs, so that it may be carried in blocks, like ice. Such milk, upon thawing, has the taste of fresh milk, can be churned, or boiled just as fresh milk can. It can be preserved for two or three weeks, if kept at a suitable temperature. The preparation, however, always requires the use of an ice machine and suitable non-conducting receptacles for milk, and is hardly as practicable as sterilization.—*Lancet and Clinic.*

CONVULSIONS AS A CAUSE OF CEREBRAL HÆMORRHAGE IN EARLY LIFE.

Ashby (*Practitioner*, June, 1891) refers to the difficulty of determining whether in those children who are hemiplegic, and who give a history of severe convulsions, these caused minute hæmorrhages which gave rise to the convulsions, or whether the convulsions and the hemiplegia were both caused by hæmorrhages. He is inclined to think that often the convulsions are the cause of the hæmorrhage, and he gives the following case to support this view: A child, twelve years old, was brought to the hospital suffering from right hemiplegia. The history given was that at the age of two years he had several severe convulsions attributed to indigestion; before these he was apparently quite healthy, but afterwards it was noticed that the right arm was useless, and he dragged the right leg. Until the age of ten he had many fits, but since then he has been free. He died of tuberculosis a few months after admission. The brain appeared healthy when examined externally, but on section several small old blood cysts were found in the neighborhood of the corpora striatata on both sides, but they were very much larger on the left side than the right. Dr. Ashby believes that at the age of two the convulsions gave rise to the hæmorrhages, and the paralysis supervened upon them, for there is nothing whatever to indicate that any thrombosis, embolism, or arteritis could have caused the hæmorrhages.—*Brit. Med. Jour.*

HYGIENE.

BORIC ACID, &c., AS FOOD PRESERVERS.

A few months ago a person who sold milk, which had been deprived of part of its cream, and which contained some boric acid, was heavily fined by a London magistrate. The fine was imposed, partly on account of the debasement, partly because of the pres-

ence of boric acid. This substance, with or without its sodium salt (borax), and salicylic acid are largely employed in the preservation of cream and other ready perishable articles of food. In some countries the nature of food-preservatives is inquired into by the authorities, and such of them as might be prejudicial to health are prohibited. In Berlin no preservative of any kind is allowed to be put into milk. In Holland salicylic acid as a preservative is interdicted, although previously it was largely used, especially in beer. In France, salicylic acid is not allowed to be used; and in Spain and Italy, preservatives other than alcohol are not permitted to be added to wines. In these countries, bisulphites are frequently used to keep beer from becoming sour, and the practice seems to have had some sort of official recognition by the Excise authorities. As to the effects of the continuous use of boric acid, borax, and salicylic acid upon health, opinion is divided, but the weight of it is against their use. The medicinal dose of boric acid is from 5 to 30 grains for an adult, and 2 or 3 grains for a child. From 5 to 12 grains of boric acid and mixtures of borates are added to a pint of milk; a child using a pint of milk would, therefore, take a big dose of the antiseptic. It may be that these bodies do not affect one's health when used in the proportions in which they are found in food; but it seems irrational to suppose that compounds which prevent the evolution of organisms, and arrest chemical changes in organic bodies, would have no influence upon the processes of digestion. The whole subject of the use of antiseptics in food ought to be carefully considered.—*Dublin Journ. Med. Sci.*

SPREADING DISEASE BY THE CLINICAL THERMOMETER.

An article in the *Medical Record*, May 16th, headed "Dentistry and Syphilis," reminds me of the thoughtless and filthy manner I have seen the clinical thermometer used by physicians, and that by physicians of good standing and undoubted ability. I cannot call your attention to any particular case that would demonstrate, without doubt, my views; but my conviction is sufficient to prompt me to make the assertion that disease is often conveyed by the clinical thermometer.

I have seen the thermometer used when the amount of mucus accumulated on it was so great as to make it almost difficult to see the register. The majority of practitioners wipe the instrument off with a handkerchief, towel, or even the bedclothing, and carefully place it away in a case prepared with a small amount of absorbent cotton in the bottom to prevent breaking, and, unintentionally, to preserve the germs from time to time, to be conveyed to the next unfortunate, who may be the first patient called upon.

I make it a rule to clean my thermometer every time it is used, whether I suspect any infectious disease or not, at the patient's residence. I use soap and water, and if no disinfectant is at hand, I use, on my arrival at my office, either boracic, carbolic, or corrosive sublimate solution, in order that I may use my thermometer with a clear conscience when it is again needed.—L. M. Powers, M. D., in the *Medical Record.*

TRANSMISSIBILITY OF SYPHILIS.

As published in his magnificent *Atlas of Venereal and Skin Diseases*, Prof. Morrow's conclusions in reference to the hereditary transmission of syphilis are:

1. A syphilitic man may beget a syphilitic child, the mother remaining exempt from all visible signs of the disease; the transmissive power of the father is, however, comparatively restricted.

2. A syphilitic woman may bring forth a syphilitic child, the father being perfectly healthy; the transmissive power of the mother is much more potent and pronounced, and of longer duration than that of the father. When both parents are syphilitic, or the mother alone, and the disease recently acquired, the infection of the fœtus is almost inevitable; the more recent the syphilis, the greater the probability of infection, and the graver the manifestation in the offspring.

3. While hereditary transmission is more certain when the parental syphilis is in full activity of manifestation, it may also be effected during a period of latency when no active symptoms are present.

4. Both parents may be healthy at the time of procreation, and the mother may contract syphilis during pregnancy, and infect her child in utero. Contamination of the fœtus during pregnancy is not probable if the maternal infection takes place after the seventh month of pregnancy.

MEDICAL CHEMISTRY.

CHLORAL-PHENOL AND PHENOL CAMPHOR.

Chloral has the property, when rubbed with certain bodies, such as camphor, of

forming therewith syrup liquids. With phenol (absolute carbolic acid) it also liquefies, and a preparation composed of equal parts of phenol and chloral is used in medicine for allaying toothache, as well as for its antiseptic properties. A recent study by Fabini, says the *Chemist and Druggist*, shows that chloral-phenol possesses the odor and taste of its constituents, and when applied to the skin produces inflammation and an eruption of small blisters. It is a colorless and clear liquid, having a sp. gr. at 20° C. of 1.289, so that it sinks in anhydous glycerin. It is soluble in alcohol, acetic acid, amyl-alcohol, chloroform, carbon bisulphide, and glycerin, as well as in ether when slightly warmed. It is only partially soluble in petroleum ether, and benzine only dissolves a little of the fluid, and what is dissolved is chloral phenol. Fabini tested the fluid thoroughly, with a view to determining whether it is a mechanical mixture, and it behaved in every way towards re-agents as carbolic acid does, while with sulphuric acid some of the chloral-phenol yielded, after twenty-four hours, a velvet-colored plaster-like mass, which consisted of meta-chloral and phenol-sulphonic acid. There seems to be no doubt, therefore, that chloral-phenol is a mixture.

This preparation should not be confounded with the phenol camphor devised by Cockrane (not campho-phénique), and made by mixing together 1 part of carbolic acid and 3 parts of camphor. After twenty-four hours this becomes a liquid, having a sp. gr. of .990. It is used with oil as an antiseptic. As a spray it may be applied to the skin to produce local-anæsthesia. It may be employed for disinfecting surgical instruments, and upon wool and gauze for wound dressing. It is soluble in alcohol, ether, and oils, but not in water or glycerin. Menthol, cocaine, salicylic acid, iodoform, chloral hydrate, and mercuric chloride are soluble in phenol camphor.—*Pharmaceutical Record*, June 11, 1891.

THE PRESENCE OF ALCOHOL IN COMMERCIAL ETHER.

If a clear mixture of 4.5 volumes of a saturated solution of potassium bicarbonate and 1 volume of a saturated solution of mercuric chloride is shaken up with commercial ether, the mixture becomes turbid in ten to twenty minutes, and a white, amorphous, precipitate separates out. If further quantities of ether are added, all the mercury is eliminated except traces, whilst the substance which reacted upon the ether is withdrawn from the mercurial solution.

The yellow or brown color imparted to commercial ether on the addition of potassium hydroxide is occasioned by alcohol.—*Arch. d. Pharm.* and *Chem. News.*

NEWS AND MISCELLANY.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The Mississippi Valley Medical Association will hold its seventeenth annual session at St. Louis, Wednesday, Thursday, and Friday, October 14, 15, 16, 1891. Reduced rates and an excellent programme will bring out a large attendance. The medical profession is respectfully invited. The officers are as follows: C. H. Hughes, M. D., 500 N. Jefferson Avenue, St. Louis; E. S. McKee, Secretary, 57 W. Seventh Street, Cincinnati, Ohio; I. N. Love, M. D., Chairman Committee of Arrangements, 501 N. Grand Avenue, St. Louis, Mo.

TRI-STATE MEDICAL ASSOCIATION.

The Third Annual Meeting of the Tri-State Medical Association will convene in Turner Hall, Chattanooga, Tenn., Tuesday, October 27th, 1891, and continue in session three days. Indications are that it will be one of the largest Medical meetings ever held in the South. Representative physicians from all sections will be present.

All who desire to read papers should send title to the Secretary of the Association before September 1st. In due time a circular will be issued giving a complete list of all papers and names of exhibitors who apply for space before October 1st.

W. L. Gahagan,
Sec'y of Executive Com.,
P. O. Box 542. Chattanooga, Tenn.

THE NUMBER OF TUBERCLE BACILLI IN PHTHISCAL SPUTUM.

Dr. E. H. F. Nuttall, of Johns Hopkins University, has shown that phthiscal patients expectorate from 250,000 to 4,000,000,000 bacilli in twenty-four hours. Taking the average of, we will say, 100,000,000 per day, the patient would expectorate 365,000,000,000 bacilli a year, and if he lives three years, the total number of micro-organisms ex-

pectorated during his illness would be 1,095-000,000,000. Or multiply the year's annual out-put of 365,000,000,000 by 70,000, the number of cases of phthisis in this country, and we are confronted with the sanitary problem of destroying 75,000 times 365,000,-000,000 microbes every year. These are rather discouraging figures, but it may be supposed that the vast majority of tubercle bacilli in the sputum die as the result of intercurrent disease or a pitiless environment. —*Med. Rec.*

HOW DOCTORS LIVE.

A correspondent of the *Medical Age* says: "I have endeavored to keep track of 100 of my medical friends after graduation, especially of what they did during the first five years, and find nearly 75 per cent. had to resort to other employment to make a living. Twenty-three received a salary either in addition to practice or separate therefrom. Fifteen were proprietors of drug stores. Three were insurance agents. Four loaned money. One sold real estate. Three were connected with medical journals. One was an agent for drugs. One for books. One preached. One was in the patent medicine business. Two were farmers. One a manufacturer. Two gave massage treatment. One sawed wood, and subsequently suicided. Twelve gave up in disgust, and one never tried practice at all. Twenty-nine graduates only in 100 exclusively devoted themselves to medicine, and of these 11 associated themselves with other practitioners, and in many cases fell heir to their practice."

AN ARMY MEDICAL BOARD.

An Army Medical Board will be in session in New York City, N. Y., during October, 1891, for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the board will make application to the Secretary of War, before September 15, 1891, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from whence they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal knowledge, from at least two physicians of repute, as to professional standing, character, and moral habits. The candidate must be between 21 and 28 years of age, and a graduate from a Regular Medical College, as evidence of which, his Diploma must be submitted to the Board.

Further information regarding the examinations may be obtained by addressing the Surgeon General U. S. Army, Washington, D. C.

C. SUTHERLAND,
Surgeon General U. S. Army.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

Telegraphic advices from London, under the date of Aug. 10, state that the seventh annual session of the International Congress of Hygiene and Demography opened in St. James' Hall, in the afternoon of that date. At an early hour the royal yacht left Portsmouth for Cowes, Isle of Wight, the object of the voyage being to bring to England the Prince of Wales, who was to preside at the Congress. His Highness arrived in London on good time and when he called the Congress to order there were 2,300 delegates present in the hall. Among the more prominent delegates in attendance were Professor Pasteur, of Paris, and Professor Koch, of Berlin. Many of the leading doctors and scientists of Europe will take part in the deliberations.

When the Prince of Wales arose to make his address of welcome he was heartily cheered. He discoursed understandingly on hygiene and said that the people were exposed to many sources of danger, owing to the existing state of factories, from overcrowding and from the unsanitary condition of towns. He was happy to say however, that statistics showed a marked improvement in this direction which might safely be taken as an earnest of the increased good to be accomplished by scientists in the future.

Among the many important subjects to be discussed is the general question of the means to be employed for preventing the spread of epidemic disease from country to country, which will be introduced by Surgeon General J. M. Cunningham, of England.

CONSANGUINITY, CONCEPTION, AND MALFORMATIONS.

Has the condition of the male parent, when begetting, any distinct influence on the offspring? A case related by M. Guéniot at the Paris Académie de Médecine would seem to favor the theory that there is such an influence; but in this case consanguinity must be also taken into account. A woman married her nephew, a man three years younger than herself and for long ad-

dicted to absinthism and other forms of intemperance. She declared that he was always partially drunk when she admitted his embraces. The curse of the mediæval Melusina fell on the offspring: seven children were born, of which only one survived and several were deformed. The last child was of great size, causing labor to be difficult. It was anencephalous, with six fingers on each hand and six toes on each foot; the external genitals were absent. Two large serous cysts occupied the liver, and were the cause of the great bulk of the child. Considering how some of the most minute physical peculiarities and some of the most subtle mental characteristics are transmitted from father to child, it is not wonderful that the offspring may be influenced by the state of its sire when impregnating its mother. The influence is probably indirect in a case like the above. No doubt absinthism and ordinary intemperance affect the nutrition of all cells and fluids, spermatic included. The nervous condition of the mother may be unfavorable under the circumstances. The share of consanguinity in this case is doubtful. Recent researches tend to show that unions of consanguinity may keep up or intensify diseases and malformations already in the family, but there is no evidence that they cause new maladies and deformities.—*Brit. Med. Jour.*

THE MEDICO-LEGAL ASPECT OF THE JACK-THE-RIPPER CASE.

Much interest has been excited during the past week over the trial of an alleged "Jack-the-Ripper." The circumstances of the crime have been made very widely known. A woman of the lowest class was found one morning murdered and mutilated in an East Side resort. The person with whom she slept that night had disappeared, but the police apparently feeling it a matter of pride to capture some one, secured a half-witted Algerian who had slept in a room in the same house on the same night. In the course of time a very pretty web of circumstantial evidence was woven about him. The most important of these circumstances was the fact that stains of blood were found on the Algerian's clothes, on the floor or door between the rooms, and of course on the bed or clothes of the murdered woman. It was asserted by the medical experts that these stains all were mingled with matter which came from the small intestine, and that this chylous material came from a meal that was in the same stage of digestion. This identity of the different blood and fæcal stains, so far as we can make out from the reports, was based on the fact that tyrosin, and perhaps other products of pancreatic digestion, were found in them all, as well as in the scrapings from the prisoner's nails. Tyrosin is a substance which crystallizes usually in the shape of fine needles, grouped as radiated stars. In this respect it resembles somewhat hypoxanthin. It reacts to certain tests; but other bodies, such as sarkin, react in a similar way. Tyrosin is found in the urine in certain diseases. Altogether it would seem a little hazardous to convict a man on the microscopically established identity of minute collections of blood and intestinal matter. But the lawyers for the prosecution were skilful and the police had collected a voluminous mass of minor evidence, mostly from criminals. The result was a conviction of murder in the second degree. The medico-legal points raised were very interesting, and we do not doubt that the evidence was given most conscientiously. It is to be hoped, however, that it will be submitted some time to the judgment of the profession. At present there seems to be a feeling that the accused was made a scape-goat for the reputation of the Police Department.—*Record.*

A CHEMICAL ROMANCE.

When *Al-Embic* uncle's wife died, he sent a *Nit-rate* telegram to his sister *An-Alyze* asking her to join him on a short trip with the *Anti-mony* they received. A week later they started from the old homestead and let their colored nurse *Chlo-ride* as far as the next town with them, where they embarked on a steamer. As they passed down the beautiful river on the banks of which *Flowers of Sulphur* were in full bloom, they saw a crowd of little darkies taking a *Sand-Bath*, and they remembered this particularly as there was no other *Nigro-sine* during the entire trip. A black bird that flew past the vessel's bow was pronounced to be an eagle by one of the gentlemen on deck, but a sailor overhearing this, remarked: "That's not an eagle, that's a *Chro-mate.*" This unsolicited *Retort* did not please the gentleman, so he descended the companionway to take a *Water-Bath.*

In the captain's cabin quite a party had collected, and an animated mythological discussion was in progress as to the year, and of what, the goddess *Io-dide.* A medical student present said he had forgotten the date, but that there was no doubt that *Io-dide* of Arsenic. Drinks were then

passed, and the medical student took some *Schiedam-Schnapps* with water, which he said was a *Standard-Solution* known scientifically as *Hydro-gen*, and that he did not mind if he took another, *Ether*. His German friend, a doctor with green spectacles, whose name was *Amyl*, when asked if he would take one too, answered,—"Ich *Sulphur* dammt sein" if ever he'd let it pass.

This nearly resulted in a fight between the German and a minister present, who objected to the use of such *Sulphurous* language. The captain, recognizing the peculiar and *Specific Gravity* of the occasion, restored order by taking a club from the wall and blandly remarking, "No *Phos-phor-us*, gentlemen, if you please."

A gay crowd of young people had collected on deck, and the gallant captain showed much attention to the ladies, of whom there were quite a number. He let them look at *Mercury* through his *Beeker-Glasses*, showed them how he took soundings with a *Test-tube* and made himself generally agreeable. There seemed to be a great *Affinity* between himself and a girl nicknamed *Sili-Cato*, because she giggled every time she saw him. This so disgusted *Ani-Line* that she told *Sali-Cylic* that neither she, nor *Ga-Lena*, nor her sister *Ethyl*, would ever speak to her again. Everything went well until the German doctor's mother in-law, a regular *Tartar-ate* too much of the *Platinum-sponge* cake, served with the *Is-inglass*, which precipitated her upon the *Fluor-in* an unconscious condition. This accident made the *Prussian-Blue*, but as he had carefully *Red Prussiate* before he started out on the trip, and had taken his medicine chest along, he was equal to the occasion, and soon able to announce to the anxious company that the old lady's illness was nothing serious, a mere fit of indigestion caused by her eating too much *Sauer-Stoff*. He further ventured the good advice that if people generally *Lead* a more regular life, and instead of stuffing at dinner would only *Dyn-a-mite*, the world would be healthier.

He said the word *Pig-ment* an animal, but in its metaphorical sense should apply exclusively to man. He supposed, however, it was no use preaching to the generality of man, for if born an ox, an *Ox-y-dize*. One of the passengers, who evidently felt himself hit by these remarks, said sotto voce, to his neighbor, that there was unnecessary *Causticity* in the doctor's talk, a great deal of which was a transparent *Lye*. After the dinner, music was in order, and another German brought out a cornet, which he called his *Blow-pipe* and produced a composition *Bi-sulphate* followed by another *Bi-phosphate*.

Both of these compositions were very appropriate for the occasion, being rhapsodies by the sea, and hence fitly called studies in *Ultra-marine* by the learned doctor.

Then riddles and conundrums were proposed, the first one being, "Why are *Clay* and *Phosphorus* identical," the answer being "Because it is *A-luminous* material."

The next one was, "Why is the feeding of a bull at midnight a chemical operation?" Answer, "Because it is giving an *Ox-a-late* meal." A lawyer said that in so far as this could only apply to an ox, and not to a cow, he did not consider it a *Case-in* point.

The next conundrum was proposed by the medical student, and was as follows: "How can we all be made happy?" To which the doctor responded that he had a never *Fehling-Solution* for this question, which he would now have served to the guests in the form of champagne.

A crusty chap who did not appreciate the humor in all this light talk, remarked that he thought an habitual punster the greatest *Bor-on* earth, and that he would not be surprised to hear an *As-say* smarter things than that, indeed a *Copper-as* if it could talk. Fortunately the irascible German doctor did not overhear these ill-natured remarks, or there might have been a *Par-af-fine* black eyes in that company.

After all this fun the talk assumed a graver vein, and the festivities wound up, as will my story, with a few appropriate remarks by the minister. He said:

"When a mere child, I once asked a minister whether a bad man could ever go to Heaven. He replied that in virtue or *In-cin-e-rated* man's chances equal, providing reform took place in time; in other words, he did not think early *Cin-a-bar* to glory.

"Oh, my friends," he concluded, "we are none of us pure *Gold*, none without an *Alloy* of *Baser-Metals*, but, dear friends, if in the darkness of our sin, we will only *Cry-o-lite*, it will generally come to us.

"I once knew a man who led a very wicked life until his friends all said 'old *Nick-el* get him' but the *Dross* fell from his soul at last; and often after I heard his own *Tung-state* the story of his reform. My friends, all the world's a stage, and we are but actors on it. There are lives, pure, honest, undramatic, others *Ar-senic*, *Ac-id* were; sometimes even the *end* of such lives *Ar-senical* effects."—*V. G. Bee in Western Druggist.*